

RADIO

THE NATIONAL TRADE MAGAZINE
JULY, 1932

MODEST TRIAD FACTS



Modesty

THERE ARE NO BETTER TUBES

"Modesty Forbids" our claiming to have the "Best".

THERE IS NO MORE MODERN LINE

"Modesty Forbids" our mentioning that tubes, like the 210-S, were first made by us.

THERE IS NO MORE PROFITABLE LINE

"Modesty Forbids" our referring to our increasing number of price-maintaining sales outlets.

THERE ARE NO MORE "REPLACEMENTS"

"Modesty Forbids" our calling attention to returns during last year (Sh-h-h! less than two per cent—including breakage in transit).

THERE IS NO FASTER GROWING LINE

"Modesty Forbids" our saying anything about the 300 per cent gain in sales for the first quarter of this Year, over 1931.

THERE IS NO MORE PROGRESSIVE LINE

"Modesty Forbids" our telling you about the seventeen new types we have announced, including photocells, television, short wave, ultra short wave and "amateur" use.

THERE IS NO BETTER EQUIPPED PLANT

"Modesty Forbids" our letting you know that our engineers are men of long experience and, under their capable direction, our modern machines can produce 30,000 "Honorbuilt" Triad Tubes a day.

THERE IS AT LEAST ONE TUBE COMPANY

"Modesty Forbids" our uttering the fact that Triad was first to recognize the importance of the "serviceman" and the small country dealer as a most important moulder of tube consciousness and developer of sales which stay sold.

BUT—

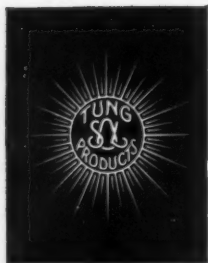
There Isn't A Single Reason Why You Should Not Learn The Reason.

TRIAD TAKES OFF ITS HAT

TO NOBODY.

TRIAD MANUFACTURING CO., INC.

PAWTUCKET, R. I.



TUNG-SOL

ANNOUNCES A CONSIGNMENT PLAN

for the DISTRIBUTION and SALE of RADIO TUBES

Effective **MAY 1, 1932** Tung-Sol Radio Tubes will be distributed on a consignment basis, through carefully selected wholesale and retail agents. This is the first time any manufacturer in the tube industry has attempted such a plan of distribution on a nation-wide scale. Only a few leaders in the industry could operate such a plan successfully because of the large capital reserve which it obviously necessitates. The advantages to the entire trade are expected to be numerous. ¶ Broadly speaking, this plan will undoubtedly exert seven immediate stabilizing influences, which the entire industry sorely needs:

1. By the selection of only high grade outlets, it will prevent unfair and ruinous competition.
2. It will assure both wholesaler and retailer of a fair margin of profit on all tube sales.
3. It will tend to create a retail price structure which the consumer can learn to depend upon as a standard of tube values.
4. It will fully protect both wholesaler and retailer against losses resulting from price reductions and obsolescence.
5. It will give the wholesaler an additional protection against credit losses which is not existent under present selling methods. This is very desirable in these especially trying times, particularly in the radio industry.
6. It will enable both wholesaler and retailer to carry sufficient stocks of all types of tubes to meet their requirements without any financial investment whatsoever on either merchant's part.
7. It will eliminate the wholesaler's usual investment in current accounts receivable.

When viewed from all angles and carefully studied, this plan of distribution offers advantages to the individual dealer and wholesaler, which are almost illimitable. It is a revolutionary plan, but one which is soundly conceived. It will have a far reaching effect on the tube business of every section of the trade, and for that reason is of universal interest to all wholesalers and retailers of radio tubes. Wholesale and retail agencies are now being selected for unfilled territories. Interested merchants are invited to write for complete details or see us at the R. M. A. Show.

BOOTHS B-54 and B-55, BALLROOM, TUNG-SOL HEADQUARTERS, SUITE 1606, STEVENS HOTEL

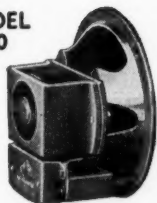
TUNG-SOL RADIO TUBES INC. - NEWARK, N. J.

(Licensed under patents of Radio Corporation of America)

Divisions: Atlanta, Baltimore, Boston, Charlotte, Chicago, Cleveland, Dallas, Detroit, Kansas City, Los Angeles, New York, St. Paul

for July, 1932. Volume 14. No. 7. 25c per copy. \$2.00 per year. Published monthly by Pacific Radio Publishing Co., Inc., Pacific Building, 821 Market St., San Francisco, Cal. P. S. Lucas, Editor. H. W. Dickow, Business Manager.
Entered as second class matter at the Post Office at San Francisco, California, under the Act of March 3, 1879.

MODEL
150



6 1/2 inch Dynamic Speaker

MODEL
152



10 1/4 inch Dynamic Speaker



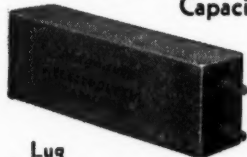
MODEL 154--Auto Speaker



MERSHON
Electrolytic
Capacitor

Stud
Type
Mounting

MAGNAVOX Electrolytic
Capacitors



Lug
Terminals

MAGNAVOX Electrolytic
Capacitor



Flexible
Lead Terminals

Magnavox

SPEAKERS AND CAPACITORS

Mer-shon

CAPACITORS

● MAGNAVOX SPEAKERS

Magnavox' 21 years of leadership in acoustics is significant. There is occasionally one manufacturer in an industry who will not compromise high standards of quality or performance, even in a price market and who continues to perfect and improve under all circumstances. The service which such a firm renders to the entire industry is apparent. Magnavox products which you may see at the R. M. A. Trade Show prove Magnavox' right to that position in the radio speaker industry.

● AUTO SPEAKERS

Magnavox engineering has mastered the tone problem—the most difficult in auto radio—and has added exclusive features assuring ease and simplicity of installation, with single stud mounting. Available in models 150 and 154, optional in wood or metal baffle cases.

● SPEAKER AND CAPACITOR COMBINATION

Illustration at the right shows the ideal adaption of capacitor and speaker combination mounting. Model 154 is shown with 2-8 Mfd. 450V. capacitors. This offers advantages both in space factor and ease of installing filter unit.

● MERSHON CAPACITORS

Improved, compact models in which space factor has been emphasized. Trouble-free—puncture-proof—self-healing—with a record of proven stability. Free from mechanical leakage. Made in several types of mounting for your convenience.

● MAGNAVOX CAPACITORS

Magnavox now offers a complete range of filter and By-Pass dry Electrolytic Capacitors in all standard capacities and voltages.

Magnavox engineering service is available to recognized manufacturers upon request, without obligation.

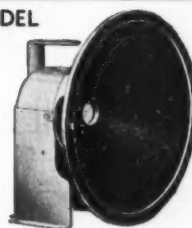
**Welcome to the R. M. A. Trade Show
Speaker and Capacitor Headquarters**

Stevens Exhibition Hall, Space 93-A. Stevens Demonstration Rooms,
704-A, 705-A, 706-A

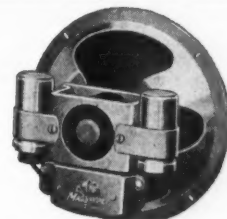
MAGNAVOX
MODEL 530
Dynamic Speaker

especially made and adapted
for Class B radio sets. See and
hear it at the R. M. A. Show.

MODEL
517



14 inch Dynamic Speaker



Speaker, Capacitor Combination

MERSHON
Electrolytic
Capacitors

Clamp
Type
Mounting



MAGNAVOX BY-PASS
Electrolytic Capacitor

Magnavox Company Ltd.

ESTABLISHED 1911

GENERAL OFFICES AND FACTORY, FORT WAYNE, INDIANA

Subsidiaries

THE MAGNAVOX COMPANY, ELECTRO FORMATION, INC.,
MAGNAVOX (AUSTRALIA), LTD., MAGNAVOX (GREAT BRITAIN), LTD.

Tell them you saw it in RADIO

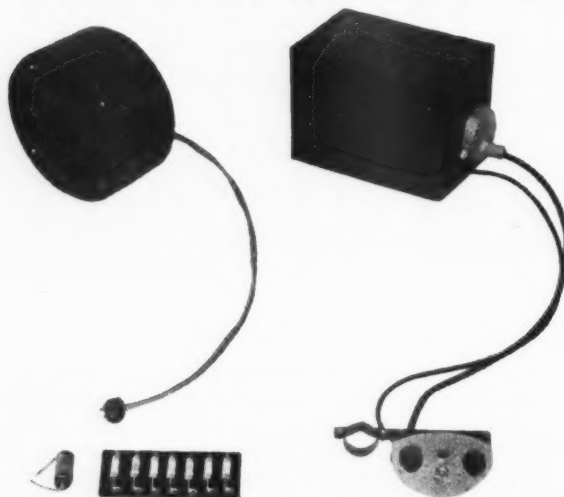
EL REY AUTO RADIO

WITH REMOTE CONTROL

\$49⁵⁰
LIST

(Not including
Federal Sales Tax)

INCLUDES
REMOTE
CONTROL



\$21⁹⁵

(Not including
Federal Sales Tax)

TO DEALERS
(Less "B"
Batteries)

*Cash with
Order.*

SPECIFICATIONS

FIVE TUBES including:
Three No. 51 Multi Mu
One No. 24 Screen Grid
One No. 47 Pentode

EIGHT-INCH FULL DYNAMIC SPEAKER,
mounted in box, easy to mount.
SEVEN SPARK PLUG SUPPRESSORS
ONE CONDENSER FOR GENERATOR
TEN-FOOT SHIELDED CABLE

All EL REY Auto Radios Equipped With Remote Control

Dealers

El Rey's new automobile radio sets, all of which are fully equipped with remote control, will prove to be fast sellers this summer with a fair margin of profit, though selling at low prices. They out-perform the old-type auto radios.

Specially designed circuit includes up-to-the-minute developments. Most sensitive of all radio sets. Remote control works at maximum peak efficiency at all times. Finest standard parts used throughout. Uniform tone; super selectivity. Fully complete, yet compact.

We also make a
4- and 5-Tube TRF SET.
Quality merchandise,
selling at
Attractive prices.



ILLUSTRATED IS THE
NEW 6 TUBE EL REY
SUPER RECEIVER.

\$16⁹⁵
NET

(Not including
Federal Sales Tax)

COMPLETE WITH NEW
6 PRONG TUBES

CASH WITH ORDER

Export orders \$1 additional for packing charges.

EL REY RADIO MANUFACTURING CO.
8406 SOUTH BROADWAY
LOS ANGELES, CALIFORNIA

Tell them you saw it in RADIO

SUPREME DIAGNOMETER AAA 1



Dealers' Net Price
f.o.b. Greenwood, Miss.
\$147⁵⁰

AAA 1

5 ultra modern testing instruments in one for the price of **1**

SUPER DIAGNOMETER, plus SHIELDED OSCILLATOR, plus ADVANCED TUBE TESTER, plus OHM-MEGOHMMETER, plus CAPACITOR TESTER . . . 5 essential instruments in one at the price of one.

Ask Your Jobber for Demonstration

The Model 90, and the other SUPREME INSTRUMENTS as follow, carry the same guarantee as the AAA 1.

SUPREME OSCILLATOR MODEL 70

A thoroughly shielded, completely attenuated Oscillator . . . output meter . . . high resistance ohmmeter.

Dealer's Net Price f.o.b. Greenwood, Miss., less tubes and batteries . . .	\$49.75
SUPREME OUTPUT OHMMETER	\$30.00
Handsome Carrying Case for both and Accessories	\$5.00

SUPREME OSCILLATOR MODEL 60

SUPREME Value in a HANDY OSCILLATOR

Dealers' Net Price	\$30.00	Portable	\$3.00 extra
F.O.B. Greenwood, Miss.		type	

SUPREME TUBE CHECKER MODEL 40

COUNTER TUBE CHECKER . . . "SUPREME BY COMPARISON"
Dealers' Net Price
F.O.B. Greenwood, Miss. **\$30.00** Portable **\$3.00 extra**
type

Distributors in all Principal Cities
Foreign Division, 130 West 42nd St., New York City
Cable Address: LOPREH, New York

Get it
Use it
Cash in on it
Compare it
For 10 days
FREE!

YOU have heard of the amazing ease, completeness, quickness and accuracy of the SUPREME DIAGNOMETER . . . 5 instruments in 1. Takes care of ALL the new sets and tubes, including the six-prong tubes, triple-twin, Wunderlich, Duo-Diode, Mercury Vapor Rectifiers, etc., WITHOUT ADAPTERS. Maybe you have had no real chance to prove its real economy, its convenience and income producing power. Here's how you can guarantee yourself. Send coupon below and learn how you can use the new DIAGNOMETER for 10 days FREE. No obligation. Prepare now for the onrushing service demands of the most exciting political grapple of this generation.

SUPREME SET ANALYZER MODEL 90

The famous one meter set tester that offers some of the unequalled features of the AAA 1 Diagnometer . . . and all of its own famous 1932 superiorities.
Dealers' Net Price
F.O.B. Greenwood, Miss. **\$78.50**

We will soon announce the new Supreme Model 56 Analyzer, that will be a sensation. Information now.

SUPREME INSTRUMENTS CORPORATION

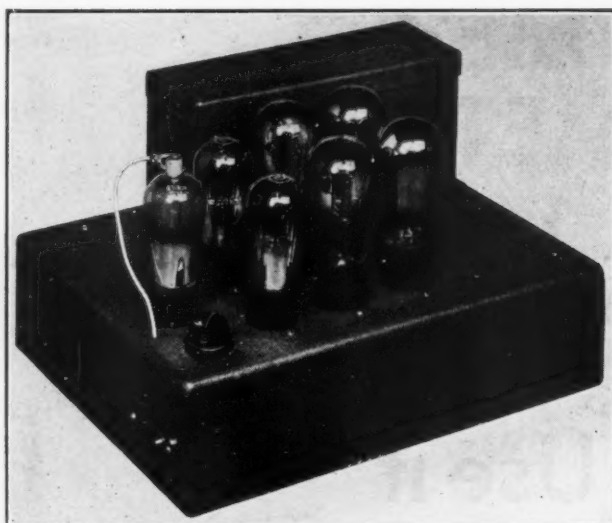
442 Supreme Bldg., Greenwood, Miss.

Tell me—absolutely without obligation—how I can use the new DIAGNOMETER for 10 days FREE.

(Here name any other Supreme Instrument on which information is desired.)

Name _____
Address _____
City _____ State _____
Jobber's Name _____
City _____ State _____

Tell them you saw it in RADIO



ELECTRICAL SPECIFICATIONS

Output—20 watts, 5% distortion—3.8% in 3rd harmonic.
Gain—90.9 D. B. at 60 cycles.
Input required for 20 watts output, 0.25 volt.
Input impedance 100,000 ohms.
Output impedance, 5 - 20 ohms—maximum output at 8 ohms.
Filament voltage 6 volts D. C. or A. C., any frequency. Filament voltage may be varied between 5 and 7 volts without detrimental effect on tubes.
Filament current, 3 amperes at 6 volts.
Plate voltage—300 volts (from 180 to 350 may be used with corresponding output—voltage over 300 is not recommended.) Six heavy duty B batteries may be used economically.
Plate current—25 M. A. no signal—average drain with signal 60 M. A.
Tubes required: 1—236; 2—237; 4—112A.

PHYSICAL SPECIFICATIONS:

Weight—12 pounds.
Height—(overall) 7 inches.
Width—9¼ inches.
Length—12 inches.

List Price—\$65.00 complete with Cunningham Tubes.

Complete power supply to operate amplifier from 110 volts A. C., 50-60 cycles. List price \$35.00.

The amplifier and power supply are finished in crinkle lacquer, baked on a heavy pressed steel base.

VICTORY

20 WATT AMPLIFIER

A 20 Watt D. C. \$ **65**
Power Amplifier for

LIST PRICE

COMPLETE WITH CUNNINGHAM TUBES

Power Amplification Now Available for Automobile
Public Address Systems of a New Principle in Design—
Giving Enormous Undistorted Output

This amplifier will find uses in thousands of places where the old system is not applicable. It will undersell any other old system three to one for the same power output.

A GAIN Victory startles the country with the announcement of their 60 watt amplifier, the 20 watt amplifier which eliminated the necessity for expensive generators in sound cars. The 20 watt amplifier had many advantages that no other amplifier of its superb performance could offer. It weighs about twelve pounds and operates from the ordinary automobile storage battery with the insignificant drain of 2.9 amperes, for its filament, and six heavy duty dry B batteries furnish its plate supply over long periods of time. It is hard to think of an amplifier using four 112 tubes supplying 20 watts of truly undistorted power, is it not? Hard to conceive an amplifier which will remove the expense from the operation of automobile and similar installations and that can be removed from the car and with the addition of the Victory Power Supply operated anywhere that 120 volts—50 or 60 cycles is available. After oper-

ating the DC 20 as a semi-portable installation in your dance hall or theatre lobby in ten minutes or less, put it back in your car and be soliciting business in the modern way—with SOUND. Mr. Service Man... go to your jobber and let him tell you how you may sell completely equipped sound cars built around the Victory DC 20 and make money in a time when money is hard to make. With the public reticent about their buying, every merchant who represents progress in your town is fortifying his sales by increasing his advertising budget. He is looking for a medium that will give him more for his money in the way of placing his concern in the limelight than any other. Your theatre wants a sound car, your dance hall and resort needs a sound car. Put one in your own car and solicit sales. Show it to your customer who wants more constructive publicity for his money. Use it to sell your own products and your services.

... And a New Victory 60 Watt Amplifier

WHILE you're with us we'd like to tell you about our two new 60 watt amplifiers and what they will do. Unlike the DC 20, it is not economical to operate the DC 60 from storage battery and it would run down the 400 volts of dry B batteries that would be necessary to operate it in short order. Where tremendous audio power is required in a sound car the plate and filament supply for this amplifier may be economically obtained from a very small gasoline driven generator that generates directly 400 volts at 400 milliamperes and which has an additional winding which charges the car storage battery at 20 amperes which more than compensates for the amplifier drain which is 9.35 amperes. This leaves a reserve for floodlighting the car. Then there is our AC 60, the same amplifier ready to plug in your light socket. The 60 line of amplifiers will modulate a 120 watt class C radio amplifier over 100%. A 1/16 horsepower motor will start and run from its output if you put a small 60 cycles voltage into it. Not that we recommend this way of running motors. One dynamic speaker will fold up in short order and if the voice coil holds out the cone will be torn from its housing. What is

it good for? Electric carrilons, hotel and school installations, amplifying a church service with speakers in the belfry so it may be heard for miles. IT HAS POWER—TREMENDOUS AUDIO POWER, a fit big brother for the DC 20. Don't forget, we specialize in speakers for heavy duty service.

Wire for a Sample Today

Manufactured by VICTORY AMPLIFIERS

A Subsidiary of

VICTORY SPEAKERS, Inc.
7131 East Fourteenth Street
OAKLAND - CALIFORNIA

A Pioneer in the Manufacture of Quality Electro-Dynamic Speakers

THE NEW *Laundry Queen* DOUBLE TUB **SPIN-DRY** **\$99⁵⁰** EAST OF ROCKIES

A beautiful, fast, full size washer-spinner for only \$99.50! And with an honest-to-goodness margin of profit for you! Mail the coupon below today for complete description and unusually low dealer prices.

The Laundry Queen SPIN-DRY is finished in a rich blue enamel with tub of mottled blue Porcelain. Spinner tub is also Porcelain. Simple and fool-proof mechanically, it is a perfect—and a fast selling—washing unit!



The **GRINNELL** *Electric* **REFRIGERATOR**

With
"FLOATED
UNIT"
\$99⁵⁰
F. O. B.
GRINNELL

The "Floated Unit" and the many other features of this great refrigerator have caught the eye of the industry. Orders for so many thousands have poured in that we have had to double and redouble our production schedules. If you are interested in increasing your refrigerator profit this year, mail the coupon below for complete description of the GRINNELL Electric Refrigerator and new dealer price list.

GRINNELL WASHING MACHINE CORP.
728 Main St., Grinnell, Iowa

Gentlemen: Send me complete description and dealer prices at once.

- ☐ Laundry Queen SPIN-DRY
☐ GRINNELL Electric Refrigerator

Name.....

Store.....

Address.....

City..... State.....

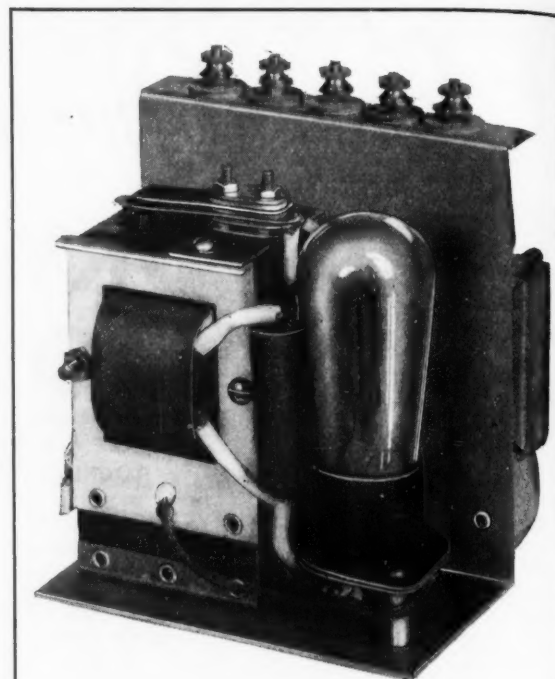
MAIL COUPON for DEALER PRICES

Tell them you saw it in RADIO

FALCK B - BATTERY ELIMINATOR

THE new Falk Auto "B" Eliminator has been designed to furnish 25 milliamperes at 180 volts, also the proper screen voltage of 90 volts. This is of the vibrator type and consumes only 1 75/100 amperes at full load. This includes the filament current for the rectifier tube. The vibrator is of a novel construction and is steady and quiet. The complete unit is mounted in a metal case 5 5/8" high, 4 3/8" deep and 4 5/8" wide. Two mounting lugs are secured to the side of the case for mounting in a suitable place. The entire unit is dust-proof and guaranteed to give perfect satisfaction. By using this unit, very little space is required and the installation is much simpler than with the use of batteries.

\$15⁹⁵
LIST
Regular
Discounts
to the
Trade



Illustrated is the New Falck B Eliminator with housing removed to show its sturdy construction which enables the unit to stand up under the most severe conditions.

Falck "AUTO-JEWEL" REMOTE CONTROL

\$7⁵⁰

LIST PRICE
Regular Discount to the Trade



THIS is a practical Remote Control for steering column or dash mounting.

It is made in a beautiful design and skilled workmanship.

Complete in every detail with all parts necessary for installation on any set where a remote control can be used.

Furnished for inside or outside mounting as required.

Three different types of mounting may be had, all geared.

3 to 1 reduction at the condenser unit.

Smooth in operation from any practical angle.

Supplied with shaft and cable 26" long and complete to the pilot light.

ADVANCE ELECTRIC CO., Inc.
1260 WEST 2nd STREET
LOS ANGELES, CALIF.

Profit from the ONE big new selling sensation in radio...the



4 DIALS IN ONE THAT COMMAND ALL THE WORLD

MASTER ALL WAVE CONSOLE

A striking example of modified 18th Century furniture design—front panels and curved flanking pilasters are matched Butt Walnut. Grain walnut sides. Genuine wood carving on front.

11 Tube Duo-Superheterodyne circuit—Magic Dial—new type



Stewart-Warner Electro Dynamic Speaker—Automatic Tone and Volume Control—45½ in. high—26½ in. wide—16 in. deep. An amazing value to retail at \$149.95.

A complete line of 11 models, including a separate Short Wave Converter, priced from . . .

\$1995 to \$18495

Stewart-Warner, trail-blazer of the air, climaxes a series of outstanding developments with the Magic Dial—that opens up new avenues of World-Wide Reception

Again Stewart-Warner dealers profit from the far-visioned leadership which last year gave them the sales advantage of offering 'Round-the-World Radio' to a public eager for new thrills.

This year, on top of proved 'Round-the-World Radio'—on top of perfected tone and volume control, Stewart-Warner dealers will cash-in on radio's foremost achievement—the MAGIC DIAL. The Magic Dial—mysterious—fascinating—gripping—has the spotlight this year. Advertising—dramatically displayed—firing curiosity will make people eager to know more about this latest sensation.

A series of masterful, colorful dramatic displays of the Magic Dial in your window will draw people into your store to "hear what it does" and "see how it works."

To profit this year—you need something new—some-

thing spectacular. Get the facts which show how and why you will Scale New Sales and Profit Peaks with the line that features the new 11-Tube Duo-Superheterodyne Magic Dial Radios. Wire, phone or write your nearest Stewart-Warner distributor—or use coupon.

STEWART-WARNER CORPORATION,

R-7

1826 Diversey Parkway, Chicago

Please send me full information on your Magic Dial Radio Line.

Name.....

Address.....

City..... State.....

STEWART-WARNER RADIO

OVER 30 MILLION SATISFIED OWNERS OF STEWART-WARNER PRODUCTS

Tell them you saw it in RADIO

A New Portable Horn « «

With a Dynamic Cone
Type Unit

WRIGHT- DeCOSTER

P. A. 20

THERE'S a real market waiting for this unit. It's just the proper outfit for temporary use in meetings of all kinds - outdoors or indoors. Never has a more flexible, adaptable, and money-making combination been offered to the sound engineer.



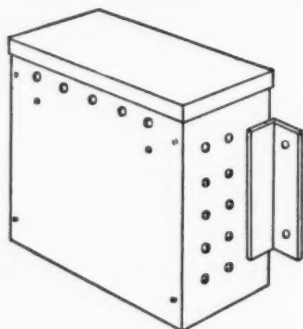
Knocked Down



Assembled

Easily Portable - Packs in small space. Weighing only 41 pounds, it can be easily handled and hung in position by attaching wire to the two eyelets on the horn and the handle on the unit housing. The unit housing which makes an excellent baffle in itself, is detachable from the horn and can be easily removed without the use of any tools. This also allows the nesting of the horns in transportation. A wire screen over the opening in the housing protects the cone.

Clear on Voice - Beautiful on Music - Ample Volume. Sensitive enough to operate on one watt. Powerful enough to handle nine watts. The P. A. 20 is capable of delivering an amount of volume that is astonishing. The terminal strip which is readily accessible from the outside, has three different impedances, 500, 1500 and 4000, enabling the user to adapt practically any number of these units to any amplifier without the need of a special impedance adjusting transformer. One No. 20 field supply will take care of three reproducers perfectly.



No. 20 Field Supply in Metal
Cabinet.
(Operates 1 to 3 P. A. 20's)

A battery of three P. A. 20's with one No. 20 Field Supply will pay for itself in a month where any rental business is to be had.

Outside measurements, length over all, 39¼".
Bell at opening, 28" x 18½". Size of unit housing, 10¼" x 7¼" deep.
Weight crated, 77 pounds.
Price P. A. 20—Horn and chassis - - - \$73.00
No. 20 Field Supply without 280 rectifying tube - 24.00

WRIGHT-DeCOSTER, Inc.

2217 UNIVERSITY AVENUE, ST. PAUL, MINN.

Export Department: The M. Simon & Son Co., New York
Cable Address: "Simontrice" New York



"The Speaker
of the Year"

Radiotorial Comment

By The Editor

Hats Off to N. B. C. and C. B. S.

THE Republican and Democratic Conventions have passed into history, a long list of defeated candidates have passed into the columns of the "Also Ran", and many an unexpected dollar has passed into the deserving hands of members of the radio fraternity. It was rather surprising to note the intense interest shown by the public in the broadcasts of these conventions; an interest in politics on the part of some, and an interest in anything that offers to be a contest on the part of the rest. An interest, nevertheless, which inspired many people to shake loose with the necessary ducats to make the down payment on a radio and many others to call in the service man to help the almost forgotten receiver recover its voice.

These broadcasts were probably the most distinct antidotes for poor business that the Columbia Broadcasting System, and the National Broadcasting Company have thrown the way of the radio dealer and service man. And they were done, not only at enormous broadcasting expense to these companies, but at the price of completely upsetting the schedules of sponsored programs for almost a week.

Well, what can we do about it? We can play ball with the broadcasting companies; all of them. It is the broadcasting companies that make possible our business; it is ourselves who have made possible theirs. It is a pecul-

iarly of the radio industry that the broadcasters can not do anything to advance themselves without aiding everyone else connected with the radio industry, just as manufacturers of radio equipment, and dealers, and service men can do nothing to promote their own welfare without helping to increase the importance of the broadcasters.

It is, therefore, to our own advantage to help make public everything the broadcaster does and plans to do for his public. Call your customer's attention to the various popular programs; over the counter, in your advertising, your direct mailings, even your billings. Never let the enthusiasm in radio broadcasts die! Discuss the programs, day and night, until those who come in contact with you and your representatives have acquired the habit of studying them in the papers, and in the various program magazines. If programs should not happen to be available in your town, have them printed up weekly and mail them out upon request, or invite people to drop in and get one. It's *radio programs* you're selling! Radio entertainment. Don't let radio become commonplace. It isn't a piece of furniture. It's something alive! Rub that in. And, getting back to politics, DON'T FORGET THE ELECTION IN NOVEMBER! It will make the conventions look sick in comparison.

Credit for the Engineers

NEVER in the history of broadcasting have the proceedings of a public gathering of the order of the two political conventions been so efficiently handled. The engineers of the N. B. C. and the C. B. S. are deserving of great credit for the way they handled the microphones at Chicago last

month. Picture, if you can, the vast hall, packed with wildly enthusiastic delegates. Yet the spokesman from every delegation was heard all over the country with distinctness and clarity. In fact, those in the radio audience heard them more easily than did the chairman of the meeting. They finally had to equip the ears of the latter with a pair of head phones.

The Treasury Interprets The Radio Tax

Manufacturers Asked To Increase List Prices of Sets To Cover Tax

"Make No Mention of Tax In Advertising Copy" - - Recommends R.M.A.

WASHINGTON, D. C.—Important guidance for the radio industry, in connection with the new federal radio tax law, was given by Treasury Department officials at a conference here June 20th of the radio manufacturers arranged by the RMA. Taxable and exemption provisions of the new law, and their application to all radio manufacturers, were explained at the RMA conference by Mr. W. E. Dodge, Chief, Manufacturers Excise Tax Section of Internal Revenue, in charge of administering the radio tax law. The new Treasury regulations, which will be available soon at local Internal Revenue Collection Districts, will be sent soon to RMA members. The regulations and Treasury rulings are subject to revision and are being changed as new facts are presented.

The RMA delegation at the June 20th conference represented about thirty members and was headed officially by Mr. Fred D. Williams of Indianapolis, President of the RMA; Captain William Sparks of Jackson, Michigan, Acting Chairman of the RMA receiving set group; Mr. S. W. Muldowny of New York, Chairman of the RMA tube group; Mr. Scott, RMA Legislative Counsel, and Mr. Bond Geddes, RMA Executive Vice-President.

Following the June 20th conference lengthy paid telegrams were sent to RMA members affected by the new tax provisions. No recommendations of practice or policy were made by the RMA. Such practices and policies are left entirely to manufacturers. The RMA has confined itself to securing and transmitting all information possible on the new tax law. The RMA forwarded recommendations of receiving set and tube manufacturers attending the June 20th conference with the Internal Revenue Bureau officials. The receiving set group attending the conference recommended that list prices be increased to cover the tax and no mention made in advertisements of the tax. The tube group advised tube manufacturers to avoid double taxation of tubes by billing tubes to set manufacturers on the certificate plan, leaving payment of the tax to the set manufacturers. Warning to manufacturers, jobbers and dealers against pyramiding the tax or increasing it beyond the exact amount paid to the Government also were sent.

The set manufacturers recommended that new list prices be established for advertising purposes by adding to present list

prices an amount equal to the total excise tax. They recommended that no mention whatever of the radio tax either as included or as an extra charge be mentioned in any advertising or literature or sales promotional work. They recommended that jobber or dealer discounts be applied to existing list prices to be used as "base" prices for billing purposes only, with invoices to jobbers and dealers to indicate the amount of the tax as an addition to the net amount of the invoice. This plan was recommended by the set group so that existing discount plans might not be disturbed. These recommendations, made by the set group, and not by the RMA, were advisory, leaving complete freedom of decision on business policy to all manufacturers.

Following is a summary of the Treasury interpretation of the radio tax law thus far made, also the questions and answers at the RMA conference. To insure accuracy this summary, together with the questions and answers, in typewritten form, was submitted to Mr. W. E. Dodge of the Treasury Department and was amplified and approved by him for release. The Treasury officials gave the following interpretations to portions of the new radio tax law:

"A complete radio receiving set is not taxable as a set. The new tax law specifically imposes the tax on the manufacturer's selling price of chassis, cabinets, tubes, reproducing units and power packs. It also imposes a tax on the other parts and accessories of a radio receiving set when such other parts and accessories are sold on, or in connection with the sale of a radio receiving set.

"Tube rectifiers are taxable if suitable for use in connection with articles enumerated in Section 607—rectifiers, other than tube rectifiers, are not taxable if sold separate from a receiving set.

"Repair parts, other than those enumerated in Section 607, for sets and phonographs are not taxable when sold separate from sets or phonographs.

"Electrical transcriptions are taxable unless it can be proven to satisfaction of Treasury Department that such transcriptions are not phonograph records. In the discussions of this item by Committees of Congress, transcriptions were included and were considered to be taxable.

"No tax will be imposed on export shipments. The proof of

such export shipment by bill of lading as provided in 1926 tax law will apply to the new tax law. It will appear as Section 1121 in the new law.

"Aerials and wire are not taxable when sold separate from a receiving set.

"Loud speakers are taxable.

"B" and "C" batteries are not taxable when sold separate from receiving set.

"Tubes used, or suitable for use, in radio receivers are taxable. Not those for laboratory, transmitting or other purposes.

"Head phones are taxable when sold as part of receiving set. When sold separately the Treasury is uncertain but will consider same taxable until it is proven that they are not reproducing unit. Advise paying tax and applying for refund, when sold separate from set.

"Volume control, fixed resistors, switches, sockets and similar articles, when sold separate from a receiving set, are not taxable.

"Condensers, either fixed or electrolytic, are not taxable when sold separate from receiving set.

"B" eliminators are not taxable when sold separate from receiving set.

"Phonograph mechanisms are taxable but not a phonograph.

"Remote control of a receiving set is not taxable if sold separately and so invoiced; otherwise it is taxable.

"An automobile receiving set is taxable under Section 607. It is possible that this ruling may be changed so as to permit sale thereof for further manufacture, tax free under Section 620.

"Receiving sets for police cars are not taxable providing they are sold directly to the State or municipality, but not through an intermediary. A sale to the United States Government is taxable.

"Receiving sets, sound equipment, amplifiers, etc., sold directly to a State or municipality, for use in State or municipally controlled hospitals, schools or for other State or municipal purposes, are not subject to tax.

"Sound equipment, amplifiers, etc., sold to privately operated hospitals, schools, hotels, etc., are taxable as an entire system unless the parts specified in the law as taxable are segregated on the invoice. If separately invoiced then the tax applies to the parts mentioned specifically in the law, but the tax does not attach to other parts used, such as wire, switches, plugs, sockets, etc. The billings must be divided to secure exemptions of such items not enumerated in the law.

"Receiving sets leased are subject to tax.

"Receiving sets, sold or leased for marine, aviation or communication services appear to be subject to tax. However, it is suggested that pending definite ruling to the contrary that tax be paid and refund claimed.

"If merchandise is sold to a subsidiary, the selling price must be the fair market price or the tax will be based on the fair market price. If it is a bookkeeping transaction the tax may be paid by the manufacturer at the fair market price, or the subsidiary may pay the tax based on the subsidiary's selling price.

"Bonus, cash and other discounts when actually earned and taken may be deducted in determining the manufacturer's selling price. If such discounts are taken after the manufacturer has made his monthly return to the Collector of Internal Revenue, he may carry such discounts as a rebate or credit claim on his next monthly return. The manufacturer must be careful to note on his books exactly what discounts are claimed for rebate or credit and why, in order that such information may be readily available to the field inspectors.

"Freight charges are deductible in determining the selling price, providing the invoice carries freight charges as separate item, but if invoice bills at a price which includes freight the tax is computed on the whole amount. If the manufacturer's selling price at the factory is the same as that at distant points delivered, freight included, then the freight charges are not deductible. If manufacturer attempts to make a profit on his freight charges, then such profit is considered a part of his sales price and is taxable.

"Royalty charges are not deductible in determining the tax. They are part of the overhead, same as factory building, and are part of the cost of the product.

"Pyramiding or exacting or attempting to exact, as a tax, an amount greater than the actual tax imposed is an offense punishable by fine up to one thousand dollars for each separate offense. If the tax is not specifically carried in the invoice no tax can be added or imposed by subsequent sellers. Only the exact amount of the tax can be passed on to the purchaser in any transaction. Dealers having stock on hand before the law became effective are prohibited, under possible fine up to \$1000.00 on each transaction, from adding or collecting from purchaser any tax or such goods.

"The manufacturers of tubes, speakers, reproducing units or power packs have the option of paying the tax on these articles or selling same tax free under certificate. In the latter case the tax will be paid by the set manufacturer under Section 620 of the new tax law."

H. E. Capehart Announces Sensational New Models

ONE of the most interesting announcements in the radio-music industry comes from Fort Wayne, Indiana, giving news of the formation of the new corporation operating under the name of PACKARD-CAPEHART, INC. Plant facilities of the well-known Packard Piano Company will be utilized by the new organization for the production of a complete line of popular-priced automatic radio-phonograph combinations and record-changing units.

Thus, the name of an old, reliable manufacturing organization has been combined with the name of Mr. H. E. Capehart who has long been identified with the music industry through the pioneering and development of automatic record-changing units and combination radio-phonograph models.

The most significant importance is attached to the products of the new company in that they offer the trade outstanding Automatic Radio-Phonograph Combination models in a range of prices appealing to the greatest number of buyers of musical merchandise.

In an interview concerning the plans of his new organization, Mr. Capehart stated:

"Having been identified with the design and manufacture of automatic record-changing combinations and having pioneered

them over a period of five years, I have been striving for the production of models within the popular-priced range.

"Now, PACKARD-CAPEHART, INC., announces the PACKARD line of automatic radio-phonograph combinations, offering the trade the kind of merchandise it has been looking for all this time.

"The new PACKARD models bring automatic combinations within the reach of the pocket-books of the great masses of music-loving Americans. All PACKARD combinations are within this price appeal. The models are instantly recognized for their wonderful tone quality—their absolute simplicity of operation—freedom from servicing requirements—and finally, a new sales appeal to the masses, offering outstanding profits for musical instrument dealers everywhere.

"Leading retail merchants who have had an insight into our plans for these new models, pronounce them to be the kind of merchandise offering the greatest public appeal and the kind of merchandise offering dealers volume sales and "higher-than-average" profits."

PACKARD-CAPEHART, INC., it was pointed out, is a separate and distinct corporation and has no relation whatsoever to The Capehart Corporation, which was also founded and established in Fort Wayne by Mr. Capehart.

The new PACKARD-CAPEHART organization is headed by Mr. Capehart and associated with him are men thoroughly experienced in designing, manufacturing and merchandising of radio, automatic combinations and musical merchandise.

News Flashes

... at a glance:—

Hazeltine Patents Valid
DeForest in Receivership
13,000,000 Homes Still Without Radio
No Government Jobs Available
Foreign Record Business on Upgrade
Low Prices No Longer Lure Prospects
Magnavox Has Revolutionary New Speaker
Crosley Licks the Depression by Ignoring It

Hazeltine Patents Valid

In connection with the opinion just rendered by the United States Circuit Court of Appeals for the Second Circuit holding that the Hazeltine plate circuit neutralization patent No. 1,533,858 is valid and that Radiolas 16 and 17 sold by the Radio Corporation of America were infringements thereof, O. S. Schairer, vice-president of the Radio Corporation of America in charge of patents, states that the Radio Corporation of America has not produced or sold such receivers for several years and that they have long since been superseded by the modern screen grid superheterodyne receiver and others. The decision consequently has no bearing on radio broadcast receivers currently or recently manufactured and sold by the Radio Corporation of America.

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De Forest Radio Company in Receivership

THE De Forest Radio Company announces that on June 21 the Federal Court at Newark appointed a receiver in equity to manage its affairs and to preserve its assets. The application was filed by Sarlat Brothers, a creditor, and the company consented to the appointment, feeling that continued operation under present conditions would seriously impair its welfare, while on the other hand, operation under a sympathetic receivership would enable the company to complete the many orders it now has on its books. The receivership should

also permit the working out of a reorganization plan in the interests of both creditors and stockholders.

The court appointed Leslie S. Gordon, president of De Forest Radio Company, and Ralph E. Lum of Lum, Tamblyn & Colyer who are the general counsel of the Firemen's Insurance Company, as receivers. Mr. Lum is conspicuous in legal circles, having been a former president of the New Jersey State Bar Association. These appointments insure the preservation of the assets and the operation of the business for the benefit of creditors and stockholders. It is stated that in the application for receivership, it was clearly indicated that the assets greatly exceed the liabilities.

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More Figures

RADIO has taken its place as a virtually indispensable factor in the life of the bulk of the American people and the 17,000,000 radio-equipped homes testify to the permanence of interest, Homer Kunkler, sales manager of the U. S. Radio & Television Corporation of Marion, Ind., manufacturers of U. S. radios, asserted following completion of a national survey to determine the future possibilities of the industry.

Radio is rapidly extending its field of service, and it is only a matter of time before the estimated 13,000,000 homes now without radio are equipped with receivers, he declared.

There is a distinct note of encouragement for the radio manufacturers and

dealers in the fact that between 6,000,000 and 7,000,000 receivers now in use are obsolete, Mr. Kunkler stated. To this factor is added the potential market of 13,000,000 homes without radios of any kind, he said.

Talk of a saturation point in radio is as baseless as the talk of automobile saturation was in 1921, Mr. Kunkler asserted, pointing out that many automobile dealers quit business at that time in fear of barren markets.

"Radio now is, and will continue to remain a feature of American home life," he said. "Radio programs are becoming better, more diversified and more universal in appeal. Radio receivers are constantly being improved and the two factors of good programs and good radios guarantee against loss of interest by the public.

"The slightest upturn in the economic situation should immediately find reflection in a better demand for radios."

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Public Warned Against Civil Service "Coaching" Schools

WASHINGTON, D. C., June 30, 1932.—The following statement is made by the United States Civil Service Commission:

The Commission warns the public against paying money for "coaching" courses in preparation for Federal civil service examinations.

Schools which sell such courses under present conditions accept money under

false pretenses. A purveyor of civil service courses is now under indictment in Iowa for false representation. It is expected that other such cases of prosecution will follow.

Comparatively few appointments are being made in the Federal civil service. Vacancies which must be filled are filled by the transfer of those in the service or the reinstatement of those who have been in the service, wherever practicable.

It is seldom necessary to announce an examination. In most cases large registers of eligibles exist as a result of examinations held during the past year. When an examination is announced, the applicants are usually hundreds of times in excess of the need.

Money paid for civil service coaching courses at this time might almost as well be thrown to the four winds.

New Circuit and Tiny Tubes Utilized In Miniature Receiver

MONTGOMERY CARROTT, president of the Radio Products Corporation of Newark, N. J., states that its engineers have perfected a miniature receiver, with a new circuit, utilizing tiny tubes, and incorporating an entirely new type of speaker.

This loud speaker is contained in the cabinet which also includes a clock. The patented diaphragm extends over the entire inner surface of the cabinet and it is claimed for it that it faithfully reproduces all radio broadcasting, with a wider frequency range. This diaphragm is actuated by a patented piezo electric crystal placed at the bottom of the cabinet, eliminating magnets, dynamic coils, and other mechanisms. Mr. Carrott declares: "The vibratory action of the crystal is such that the tone quality produced by the speaker is of the highest order." A composition featuring the use of rochelle salts forms the basis of this unit.

The tubes, only three-quarters of an inch in diameter and about 2½ inches long over all, were developed by J. V. Capicotto, pioneer radio tube engineer. Alternating current hum is eliminated by the use of these tubes.

The entire receiver is only eleven inches high. It is uni-controlled and the single knob and dial are placed directly underneath the electric clock.

The price of the five tube model now in production is \$17.50. Others at \$12.50 and \$27.50 will be introduced later.

"The circuits used in the set embody many new and unique features that enabled this small and compact design to be achieved," states Mr. Carrott. "The manufacturers have acquired rights to a complete patent situation affecting this new kind of receiver."



Another of the New CLARION "Rock-bottom-priced Receivers

Transformer Corporation of America has adhered to its policy of radio prices within reach of the average purse in announcing their sensational new CLARION line consisting of four models, manufactured to sell at remarkably low prices. These receivers represent the utmost in radio receiving apparatus and are listed as models 220, 240, 260 and 280.

Powel Crosley Blames Mental Attitude

IN MY opinion, the principal handicap retarding business today is purely a psychological one. This is true of our own industry. Too many manufacturers and dealers are thinking in terms of 'depression' and 'hard times'. Too many are resigned to take a licking, so to speak, lying down. They are admitting defeat before they even start", declared Powell Crosley, Jr., president of the Crosley Radio Corporation in addressing more than one hundred Crosley distributors attending the recent Tenth Annual Crosley Distributors' Convention, which was the occasion of the announcement of the new 1932-33 line of Crosley radio receiving sets.

"This country will not see a full recovery in business conditions until its mental attitude is changed. I do not mean by that that prosperity is to be made a reality merely by thinking prosperity, but I am convinced that a 'success attitude' coupled with a lot of hard work will

do more than any other single thing to restore normal conditions," Crosley continued. "We are practicing this theory here in our own organization and it is producing results. We are not thinking much about depression—at least it hasn't gotten us down. We don't think how bad times are—we don't admit it. We contend that there is a volume of business to be done and if you have a quality product representing a hundred cents worth of value for the consumer's dollar, you will get more than your share with the expenditure of a little more intelligent effort."

The effectiveness of such a plan as outlined by Crosley is to be seen in the fact that during the fiscal year ending March 31, Crosley doubled its percentage of the total number of radio sets sold throughout the country over the preceding year and at the same time reduced its net losses from over \$900,000 to about \$139,000.

Indicating his belief that the day of the long profit on unit sales had passed, Crosley reaffirmed his theory that the greatest opportunity for manufacturer and dealer alike lies in the production and merchandising of low priced units which while carrying short per unit profits yet because of sound dollar-for-dollar value and low price, build greater gross sales volume and hence, in the end, greater net profits.

"Certainly, I would much rather sell a large volume at a short unit profit than sell little or nothing at a long unit profit. It surely is better to have but one dollar in profit than none at all", remarked Crosley.

The Crosley policy of concentrating on low priced quality merchandise is well illustrated in the new 1932-33 line of Crosley radio receiving sets introduced at the Cincinnati meeting.

Ranging from the new Crosley "Pup", a 4-tube superheterodyne table model, equipped with Dynamic speaker and retailing for \$25.00, to the two deluxe 12-tube superheterodyne consoles, the "Commissioner" and the "Ambassador", at \$99.50 and \$119.50 respectively, this new line represents a most successful attempt on the part of the Crosley Radio Corporation to provide the public with a variety of receiving sets which, while incorporating the very latest developments in radio design, yet possess the added advantage of very low price.

Foreign Houses Want Lines

Rex Electric, Australasian Representatives, desires to represent American manufacturers of fast automatic coil winding machinery; radio power packs; coils of all descriptions and new radio accessories. Manufacturers who desire representation in Australia can communicate with Mr. Roxy Middleton, 12-14 Loftus Street, Sydney, Australia.



ARTHUR E. GARMAIZE,
Columbia's Export Manager.

Columbia Surveys Foreign Field

A DECIDED change for the better in the business outlook for 1932 and the coming years in the export territory of Columbia Phonograph Co., Inc., is noted in a survey just completed by Arthur E. Garmaize, manager of the company's export department. The survey included Mexico, the West Indies and many of the countries of Central and South America.

"Judging by reports from distributors," Mr. Garmaize states, "the West Indies are in very good condition generally, with an increasingly active demand for Columbia products. Of course, English currency off the gold standard has acted adversely for the United States exporters but proximity and a better understanding of the type of merchandise wanted are helping Columbia to maintain a strong position.

"In Mexico and Central America, heavy blows have been struck at imports, particularly those that may be considered as luxuries. In spite of that Columbia is experiencing a decided increase in demand for product, particularly in Honduras.

"Record sales in Mexico were jumped recently, due in large measure to a great demand for Guty Cardenas recordings. Guty, one of Columbia's most popular artists, a native of Mexico and a great favorite everywhere, was killed recently in a shooting affray in one of Mexico City's canteens.

"Of all the countries of South America, Ecuador has, consistently, been one of the leading markets, proportionately, for Co-

lumbia records. This despite a falling off in general business and internal unrest.

"From Colombia, Venezuela and Peru reports indicate that business is showing signs of a revival. The same holds true in Chile although political unrest combined with a bit of fireworks from Chile's famed volcanoes, checked things temporarily.

"Brazil and the Argentine have, of course, felt the pinch of the times but best opinions from there lead Columbia to believe that the worst is over. Recently shipments of Columbia's new radio line were well received. Columbia record factories in Brazil, Argentine and Chile, while not working overtime, are experiencing an increasing demand for the national recordings.

"Like revolutions, progress never goes backwards. But the commercial guillotine awaits the unrestrained forward movement of progress in business in like manner as in unrestrained revolutions. Science and commerce have rapidly developed the radio. Science is rightly proud of its achievements. Manufacturers and merchants have not tempered progress with stability and the result is admittedly and visibly disastrous.

"In our relations with our friends in other lands we have never forgotten, but have remembered always, that the art of business, as of nations, is cumulative, either in benefits or in disasters. We have been slow in entering the radio field on as large a scale as others. It was difficult to resist the onslaught of unrestrained progress but we have not had to require our friends to load themselves up with tremendous stocks because we did not over-manufacture. The prevailing critical times subjected our friends to their own national burdens but they did not have to share ours. Our friends showed their good-will by continuing their relations with us. They held themselves ready to buy from us. They did buy from us in substantial quantities when we offered this year our first line of radio receivers made in one of the best known and largest factories in the world. Our friends of neighboring nations are buyers of what we have to offer because they have learned from experience that we temper progress with stability and build for mutual cumulative benefits. We are advising our friends that our new line of radios recently displayed will place us in the radio field in the front rank. We shall also retain our high rank in the record field in other lands as our present efforts will soon show.

"Economic and legislative conditions as well have retarded commerce everywhere. Legislative bodies can do much for commerce—most, by leaving it alone. Perfect freedom is necessary to the health and vigor of commerce. High tariffs are barriers to such freedom. There can be

no such thing as a nation flourishing alone in commerce. A nation can only participate in commerce. A barrier by way of high tariffs in any nation must necessarily affect all nations.

"We are developing a new era more easily responsive to the economic welfare of the masses who in turn will respond by larger purchasing power than ever before in which the radio and record businesses will participate equally on a large scale in our own country and through exportation. But prices will have to suit the masses."

C. R. Lynch With Supreme

Mr. C. R. Lynch, 918 Chester Williams Bldg., Los Angeles, California, has been appointed direct factory representative for Supreme products in Southern California.

Mr. James P. Hermans represents this firm in the northern part of the State as formerly.

Magnavox Announces the Development of Permanent Magnet Type Speakers Which Give Genuine Dynamic Performance

THE Magnavox Company has for sometime realized the need for a Dynamic Speaker having acoustic properties of the highest order but requiring no field excitation—in other words, a Permanent Magnet Dynamic Speaker. After months of careful experimentation and testing, Magnavox Permanent Magnet Dynamic Speakers were put into production. They were shown for the first time at the R. M. A. Trade Show in May, 1932, where they met with immediate acceptance.

There is a tremendous undeveloped market for battery operated sets in rural districts beyond the reach of A.C. power lines, as every manufacturer realizes. More than nine million homes are waiting for a good battery operated set, but these potential buyers naturally expect Dynamic Speaker performance—volume, richness and tone-fidelity equal to the performance of the sets they hear in the cities. Until now, they couldn't have it. With the perfection of this new type Dynamic Speaker, it at last becomes possible to offer genuine dynamic performance in a battery operated set. Certainly this will help radio manufacturers immensely in reaching this vast potential field. Speakers of this type are also desirable for public address work in schools, hospitals, hotels, churches, etc., and in home installations requiring more than one speaker.

In the rapidly growing field of auto radio, Magnavox Permanent Magnet Dynamic speakers also simplify the set builder's problems considerably. The growing tendency to add tubes, eliminators and other devices that will consume battery current has caused manufacturers of auto

radio to seek a genuine Dynamic Speaker not requiring field excitation.

Magnavox has at last made available a speaker which completely fills the demand hitherto met unsatisfactorily by magnetic speakers and insensitive dynamic types. Magnavox has completely mastered the problem and provided ample sensitivity in this Permanent Magnet Speaker—sensitivity fully equal to wound field types consuming average values of field wattage. Permanence of field strength and mechanical alignment are assured by the construction and method of assembly, and other features covered by Magnavox patents.

The field structure of these speakers consists of a very massive though compact alloy steel permanent magnet. Unusual simplicity and ruggedness of construction provides a degree of rigidity in this new type of speaker which positively assures permanent alignment, despite extreme abuse in shipping or handling. A novel voice coil construction assures service freedom and greatly enhances sensitivity and fidelity. Magnavox Permanent Magnet Dynamic Speakers are available in two popular sizes—Model 254 which is an 8 in. speaker, and Model 252, a 10½ inch speaker.

New Lynch Motor Radio Suppressor Handipaks

As a fitting companion for the Lynch Handipak of 10 Assorted Radio Resistors, the Lynch Mfg. Co., 1775 Broadway, N. Y. C., offers to the trade in convenient and handy form the required Suppressors for the successful operation of auto radio sets. The Motor Radio Suppressor Handipaks also contain a sturdy 1. mfd. Ignition Filter Condenser fitted with a convenient assembly metal band and flexible lead. Each Suppressor Handipak contains complete information on the suppression of ignition noises and schematic assembly diagram. The Suppressors are based on the famous Lynch Metallized principle, thus making them dependable always. The capacity is extremely low—less than 0.5 micro-micro farads. The resistance range is 15,000 ohms or optional. Lynch Motor Radio Suppressor Handipaks are furnished for 4, 6 and 8 cylinder cars.

Book On Merchandising Electric Refrigerators Secures Universal Acceptance

RECENTLY the National Association of Radio, Refrigeration and Electric Distributors issued a booklet on "Merchandising Electric Refrigerators." The booklet was entirely new in its treatment of this problem and contained the actual experiences of many nationally prominent men. It was prepared with the assistance of twelve leading wholesalers and a firm of prominent Market Advisors. The booklet was designed primarily

for the retailer of refrigeration and his salesmen, as well as the wholesaler and his salesmen who should know the fundamentals of retail selling. The response received from manufacturers, distributors and retailers alike has clearly demonstrated the need for such a service. Several hundred copies have already been distributed through the trade, and it is anticipated that several thousand will be distributed as soon as the trade is fully aware of the value to be received from the book. The retail price of the book is \$1.00 per copy. Quantity lots may be purchased at a discount. Copies may be secured by writing direct to H. G. Erstrom, executive vice-president, National Association of Radio, Refrigeration and Electrical Distributors, 32 West Randolph street, Chicago.

N.A.R.R.E.D. Adopts Platform Relating To Refrigeration Industry

In the recent survey by the Association on Conditions in the Refrigeration Field, questions relating to the length of guarantee, length of free service, whether local advertising should be the Installed of F.O.B. Price, whether the distributors should assume the paying of freight on return defective merchandise and many other questions of deeply important nature to every distributor were asked. The answers to each question revealed that the distributors were practically entirely of one mind on the questions and with the replies from 250 distributors expressing their desires, the N.A.R.R.E.D. drafted a set of "Planks in Our Platform Relating to the Refrigeration Industry" to be used as the basis for the activities of the Association. The Board of the N.A.R.R.E.D. unanimously, officially approved the planks in our platform which were so decisively recommended by the distributors.

Planks In Our Platform

1. Allowance to distributors by their manufacturers for labor charges in replacing defective parts within the guarantee period.

2. Allowance to distributors by their manufacturers for labor charges in refinishing cabinets within the guarantee period.
3. Payment of freight or express charges, both ways, by the manufacturer, on defective merchandise returned to the factory for repair or replacement.
4. Protection against change in price or models for distributors and retailers. This protection to be adequate time notice of such changes and rebates for stocks on hand.
5. Reduction of excessive guarantees against defective parts or service charges by the manufacturer which work a hardship on the distributor and retailer, unless accompanied by an adequate allowance for such guarantees.
6. If list prices are mentioned in local advertisements, the list price should be the "Installed Price"—including delivery and installation in the home.
7. Promote and stimulate the education of service departments to enable the distributor and retailer to adequately service Electric Refrigerators.
8. Elimination of fake or misleading advertisements.
9. Elimination of unethical practices, particularly excessive terms—no down payments—leasing—free trials—premiums, etc.
10. Fighting luxury tax on refrigerator sales.
11. Studying and developing methods for establishing the stability and reliability of all branches of the industry concerned with the service guarantees made to the refrigerator user.
12. Establishing a closer spirit of cooperation between all branches of the industry for their mutual benefit.

STORE DEVOTES PAID SPACE TO RADIO PROGRAMS

Steps Into Gap As Newspapers Drop Listings

NEW ORLEANS, LA.—As all local newspapers announced the discontinuance of publication of radio programs because of "lack of space," Maison Blanche, leading department store, sprang a coup by picking up the threads where the newspapers left off.

It is running the full radio program of NBC and others over WSMB from 6:30 to 10:30 P.M. as part of its advertising.



A refrigerator display of NORGE which was acclaimed an outstandingly successful sales builder.

Boulware Tells Why Low Price Has Lost Lure

PITTSBURGH, PA.—The buying of bargains slows up after a prolonged orgy of price advertising and price selling because markets are created by selling what the product will do and not how much it costs, L. R. Boulware, general sales manager, Syracuse Washing Machine Co., Syracuse, N. Y., told the Pittsburgh Advertising Club recently.

Since three years of price advertising have already used up the markets developed by creative advertising in the past, hope for future sales must be based upon quality merchandise performing a better or different function than the old, thus creating new consumer wants, Mr. Boulware argued.

"Price is no object at all until after a person has come to want a product by reason of what that product means to him personally," he said.

"In normal times industries do the advertising and promotional work necessary to create desire, but when hard times come along creative selling ceases and emphasis is placed entirely on price, thus merely hastening purchasing by those who have already been sold on the usefulness of the product.

Appeal of Advertising

"Advertising appeals only to those who have been made to want the products by virtue of previous creative selling, so not only in such a time do we fail to educate the new factors being brought into the market but we use up the old market."

While advertising can perform a major function in creating new wants, other steps must also be taken.

First and most important, he suggested, is capable, trained retail selling which will direct the shopper's attention away from price, and toward new or improved merchandise. Coupled with this must be new and different displays, individual contacts of every possible kind with likely prospects, and miscellaneous outside contacts through schools and others.

The advertising itself, in the new drive to create wants, will be dramatic.

"It will be news; it will tell what the product will do rather than the price at which it can be obtained; but in the main it will go no further than paving the way for the final culmination of the sale through individual contacts," Mr. Boulware concluded.

Kolster Wars On Static In Summer Drive

NEWARK, N. J.—Convinced that summer sale of radios has been retarded by faulty reception rather than the public's lack of interest, Kolster Radio, Inc., is beginning an "out of season" campaign on its new rejectostatic circuit models.

Marschalk & Pratt, New York, will release copy to newspapers in selected cities



NEW SPARTON MODEL 34
AUTOMOBILE RADIO

ITS seven-tube super-heterodyne chassis carries the new RF pentode tubes No. 39, with a special tube for automatic volume control. Type No. 238 push-pull pentodes for extra output. A new Sparton-developed drive makes possible mounting the Model 34 either on the dash or beneath the floor. Dynamic speaker, antennae trimmer condenser and other Sparton features.

the week of June 20, and the campaign will embrace 70 cities by July 15.

Initial sales efforts will be concentrated in cities having ordinances aiming at the elimination of radio static. In Los Angeles and approximately 15 other cities where city governments have taken steps to control this nuisance, the company will have a vigorous ally in power companies, electric railway companies and other users of electrical equipment.

Describe Static Makers

Elimination of man-made static, the principal talking point of the new models, will be explained in 720-line announcement copy by picturing its sources, such as vacuum cleaners, street cars, electric flasher signs and electric fly catchers.

The selling plan requires dealers to conduct uniform demonstrations in their stores, employing a minimum of three electric appliances in common use, so that the prospect can note the effect on the new Kolster and an older model. Violet-ray machines and electric fly catchers are called the best static makers.

Many dealers in test cities are said to have used the newest model of a competitive make in the test.

The enthusiasm of dealers has been stimulated by assurance that canvassing is unnecessary. They are being told to rely for prospects on their service call files, novel window displays in which static-makers are included and the company's advertising.

Franklin Radio Gets RCA, A. T. & T. and Western Licenses

NEGOTIATIONS have just been completed by the Franklin Radio Corporation, Dayton, Ohio, whereby it has obtained licenses for the manufacture of three important groups of radio items, under patents held by outstanding organizations in the radio industry.

The Radio Corporation of America has licensed FRC to build superheterodyne radio receivers under thirty-eight of the patents owned and controlled by it. A license to build radio test oscillators has been granted by The American Telephone & Telegraph Company. The Weston Electrical Instrument Corporation has also granted a license for the manufacture of tube checkers, set analyzers and combinations of such units.

A. W. Lloyd, president of the Franklin Radio Corporation, in announcing his company's policy of patent recognition stated, "The popularity of independently manufactured merchandise has been waning the past few years, as a result of the realization on the part of the buyer that liability is incurred if the merchandise sold is found to infringe upon any adjudicated patent. It naturally follows, therefore, if a manufacturer is to obtain his just share of business in a field where there are always patent questions arising, he must obtain licenses to manufacture his products under all existing patents. In order to conduct our business properly, in a sound and legitimate manner, we have adopted the policy of building no merchandise of any character, which is covered in any part or as a whole, by a patent or patents, until we have successfully concluded all negotiations with the owners or assignees of the patents, and obtained from them a license to produce that item. In this way we feel that we will have entree to many fields which would otherwise be closed to us, because of patent liability. Despite the fact that we are newcomers in the field, we are today enjoying a nice business, and our accounts have a feeling of security in dealing with us due to our policies.

New N. R. I. Course

AN ADVANCED COURSE in Radio Servicing and Merchandising, adapted to present day conditions, has recently been developed by the National Radio Institute of Washington, D. C. In the development of this training program, due consideration was given to the fact that the modern service man must be able to diagnose receiver troubles rapidly—he must understand the operation and use of all kinds of testing equipment—and he must understand how design problems are solved, the more readily to be able to make diagnoses.

The Course, given by mail, is complete.

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Every angle of the service man's job is considered in detail. Measuring receiver sensitivity, selectivity and fidelity, the proper use of meters, the methods of locating noise, the installation of receivers in automobiles and other special radio installations—all are covered in this one Course.

The Course is not for the beginner in radio. It is for the practical man with considerable experience in radio who wants to increase his earnings by bettering his technique and by learning how service engineers handle their service problems, and for men with a training in the fundamental principles of radio who want to specialize in Radio Servicing and Merchandising.

The instruction material that is part of the training program is clear and understandable. The viewpoint of the practical man is preserved throughout. There is a minimum of mathematics although wherever mathematical treatment is necessary, it is given. To help those students who are not "up" on their mathematics, there are four supplementary texts on the use of arithmetic, algebra, geometry and trigonometry in Radio.

In addition to the instruction material the training program includes provisions for individual consultation with students and their problems. The National Radio Institute maintains a corps of trained radio experts whose services are at the disposal of students. Any student has the privilege of submitting questions to the Technical and Instruction departments, whether they are on the lessons or on some radio problem of his own.

The National Radio Institute also offers courses for beginners who want to get into radio, and for men who have a fundamental knowledge of radio but who want to specialize in sound pictures and public address systems, television, commercial operating, or aircraft radio. Information on any of these courses can be obtained by writing to Mr. J. E. Smith, president, National Radio Institute, Washington, D. C.

Meissner Buys Radio Coil and Wire

IN AN interview with Mr. W. O. Meissner, president of the Meissner Manufacturing Company, 2815 West 19th street, Chicago, Mr. Meissner announced that his company has purchased the business, equipment, patents, patent applications, and good will of the Radio Coil and Wire Company formerly located at 847 West Harrison Street, Chicago, Illinois.

Mr. Meissner, one of the pioneers in the component part business, made the following statement:

"It is significant in view of the present times that we have purchased the second largest coil company in the Middle West. The combined facilities give us the most complete equipment, I believe, in the country for the efficient manufacture

of any type of coil used in the industry.

"We have completed the removal of their equipment and records and are immediately in a position to serve the former customers of Radio Coil and Wire Corporation as well as our own.

"Coming as it does, when the industry is at its lowest ebb, this purchase establishes our faith in the future of the radio industry.

"With our increased facilities and with our advance into other fields, it is natural for us to augment our organization. We are pleased to announce the appointment as sales manager, of Mr. G. V. Rockey, formerly general sales manager of P. R. Mallory and Company, Inc. of Indianapolis and until its purchase by us, general manager of Radio Coil and Wire Corporation."

There are no other changes in personnel, Mr. Meissner remains as president, James T. Watson, vice-president, and J. C. McGinley, treasurer.

NEW TRIAD SALES REPRESENTATIVES

Large Expansion Resulting from Advertising Campaign Requires Additional Sales Promotion Men

ACCORDING to a statement made by Mr. H. H. Steinle, Vice-President and General Sales Manager of the Triad Manufacturing Company, he has found it necessary to subdivide some of his larger sales territories and put on a group of new representatives.

The increase in sales resulting from the advertising campaign which the company has been running for the past four or five months, is most gratifying, especially in view of the depressed condition which the radio business in general is in.

Among the men to join Mr. Steinle's sales force are several who were for-

merly in his employ when he was sales manager of the CeCo Manufacturing Company of Providence.

L. Slowinski of Detroit, has been appointed to take care of the Michigan territory and a great many of the CeCo jobbers will remember that he did an excellent job with the CeCo line a few years ago.

In Cincinnati, Eric C. Matchette has been appointed to take care of Southern Ohio and Southern Indiana, covering such cities as Cincinnati, Indianapolis, Dayton, Columbus and Louisville.

E. C. Blakeman of Atlanta, Ga., has been appointed to take care of the Southeastern States including Georgia, Tennessee, North and South Carolina and Alabama.

Frederick Palmer of Minneapolis, Minn., has been appointed sales representative of Minnesota and North and South Dakota.

New Service Bulletin

Philco announces a new monthly service bulletin, which not only gives specifications of Philco radio receivers, but contains some interesting and helpful suggestions for radio service men in general. To be put on the list, write your nearest Philco distributor.

Janette Diagrams Available

The Janette Mfg. Company advises that diagrams showing the method of installation of the Janette Augo-B-Power on Majestic, Philco, Delco and Atwater Kent automobile radio sets, are now available. There are two diagrams for each radio, one showing the method of installation where the negative car battery lead is grounded and another showing installation where the positive car battery lead is grounded. These will be sent to service men upon request. The address is 556 West Monroe Street, Chicago.



Captain Batts, radio chief of the Indianapolis Police Force, attended the R. M. A. Show to study improvements in automobile radio that might be applicable to police work.

The powerful Stutz Indianapolis police car illustrated above was a familiar sight in front of the Hotel Stevens on Michigan avenue. It was equipped with a radio set

of Captain Batts' own design and a Mallory-Elkon "B" Eliminator which has been in continuous operation for 2880 hours.

While in Chicago, Captain Batts tuned the set to the Chicago Municipal Police Station and, with the aid of local authorities, entertained a group of R. M. A. officials by answering some of the downtown calls.

"TONEBEAM" Is Winning Slogan In Atwater Kent Contest

COINCIDENT with the showing at the R. M. A. in Chicago of the new 1933 Atwater Kent models incorporating the "Tonebeam" feature is an announcement from Atwater Kent headquarters of the prize winners in the "Tuning Light" contest, through which the name "Tonebeam" was originated.

First prize goes to A. F. Sweeney, Tulsa, Oklahoma, who, in addition to entering the winning name, made the best fifty-word statement about the new Atwater Kent method of tuning. Mr. Sweeney's statement that won the award was: "This new feature appeals

to me because it eliminates all preliminary experimenting with the controls and allows immediate and precise reception of the desired program. It measures perfect reproduction instantaneously and with the slightest amount of effort. It is ingeniously devised and is a great improvement for radio receivers."

The "Tonebeam" consists of a slender glass column, filled with neon gas, situated on the front of the radio receiver under the tuning dial. As the dial is turned to bring in a given station, a light in the tube rises higher and higher until the point of exact tuning is reached. At its highest point, the

tuning is accurate. When that point is passed, the light begins to recede. As an aid to ease and accuracy of tuning, it is regarded as the outstanding development of the past year in radio engineering.

Thousands of names were submitted in the contest for a name descriptive of this new Atwater Kent feature. Additional prizes were awarded to:

Mrs. Dorothy Gottlieb, Bethlehem, Pa., \$100; Charles F. Dargin, Worcester, Mass., \$75; Edward B. Fitzell, Trenton, N. J., \$50; and Robert B. Brown, Bethlehem, Pa., \$25. In addition, fifty contestants were awarded prizes of \$5 each.

Description of the New Atwater Kent Models

Atwater Kent Model 260 Lowboy

Ten tube Superheterodyne using the new super-powerful $2\frac{1}{2}$ volt tubes, capable of bringing in stations from distant points during daylight hours. Five gang condenser with new type shielding giving ultra-selective station separation of 10 kilocycles. Push pull amplification using two Pentode tubes. New automatic volume control, leveling off strong and weak stations and also tending to eliminate fading. Tonebeam, centralized on the panel. Quick vision compensating dial giving uniform station selection over the entire broadcast band. Range switch assuring maximum performance for either local or distant reception. Electro-dynamic speaker of improved design producing a flood of rich glorious tone free from mechanical background noises. Special four point tone control with definite tone positions. A newly designed rigid chassis base of deep drawn steel. Cabinet of American walnut, recessed pilasters of figured butt walnut with molded edges, center panel has carved mullion rail, burl maple arch and speaker grille of rich gold. For use with 60-cycle—110 volt A.C.

Atwater Kent Model 469 Lowboy

A powerful 9 tube Superheterodyne, capable of bringing in stations from distant points with ease; uses the new $2\frac{1}{2}$

volt tubes; completely shielded 4 gang condenser; Tonebeam centralized on the panel; double audio output stage with 2 Pentode tubes; automatic volume control; 4 point tone control; quick vision compensating dial; range switch for either local or distant reception; full volume electro dynamic speaker; newly designed rigid chassis base of deep drawn steel. A beautiful American walnut cabinet with recessed pilasters of figured butt walnut, burl maple arch and speaker grille of gold cloth. For use with 60-cycle—110 volt A.C.

Silent Tuning With Atwater Kent Tonebeam

With volume control fully retarded, you dial to a station and a column of orange red light rises in the Neon Tube. When the light reaches its highest point, advance the volume control and you get the station at the very peak of purest tone.

Atwater Kent Model 188 Lowboy

A high quality 8 tube Superheterodyne using the economical Triple grid amplifier detector tube and new powerful $2\frac{1}{2}$ volt tubes; improved automatic volume control modifies fading and reduces the volume of nearby powerful stations and which increases distant weak stations; quick vision compensating dial;

completely shielded 4 gang condenser; tone control; adjustable range switch for choice of local or distant reception; a new steel base of rigid construction; full size electro-dynamic speaker. The cabinet is finished in American walnut with birds-eye maple arches over panel and grille; pilasters of matched butt walnut; carved molding forms a cap for the pilasters and arch over the set. For use with 60-cycle—110 volt A.C.

Atwater Kent Model 228 Compact

An 8 tube Superheterodyne Compact with big set features, such as automatic volume control; tone control; 4 gang condenser; range switch; uniformly accurate quick-vision dial; improved electro-dynamic speaker with unusual volume. Gothic cabinet is finished in American walnut with recessed panel; arch over grille is Oriental walnut. For use with 60-cycle 110 volt A.C.

Atwater Kent Model 567 Compact

A 7 tube Superheterodyne Compact with excellent tone and plenty of volume; quick-vision dial, 4 condenser unit; electro-dynamic speaker; tone control. The cabinet is finished in American walnut with gracefully ornamental grille. For use with 60-cycle—110 volt A.C.

(Continued on Page 27)



The New Atwater Kent Line



Some of the new ATWATER KENT models, described fully on the facing page, are illustrated here. These new models carry the slogan—"TUNE BEAM"—which was awarded the winner in the recent nation-wide Atwater Kent contest.

Tell them you saw it in RADIO



CROSELY REFRIGERATOR ACCLAIMED By MISS PATTERSON

"How can they possibly sell such wonderful electric refrigerators for so little money," exclaimed the lovely Anne Lee Patterson, the most beautiful girl in the United States according to the judges of the 1931 World-wide Beauty Contest in Galveston—as she peeped with genuine excitement into the new Crosley Electric Refrigerator, one of the many she saw during her visit to the Cincinnati Electric Refrigerator Show.

This charming Kentucky belle whom Flo Zeigfeld lifted to theatrical prominence through starring her in his 1931-32 Follies, is shown in the accompanying photograph looking over the new Crosley model C-45 which, incidentally, proved one of the sensations of the show since it is both the

first electric refrigerator to be manufactured by the Crosley Radio Corporation and the first electric refrigerator to be produced by a Cincinnati concern.

Miss Patterson, whose home is in Ludlow, Kentucky, was in Cincinnati for a short visit before returning to New York to join the cast of "Show Boat", Zeigfeld's latest popular revival.

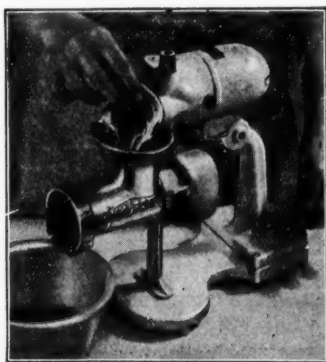
Despite the briefness of her stay, Miss United States insisted upon satisfying her "domestic instincts" by dropping in at the show in order to see for herself the latest developments in the refrigerator world. The Follies star smilingly denied her display of domesticity forecast the early pealing of wedding bells.

New Products

New Sunbeam Attachments

The Chicago Flexible Shaft Company announces two new attachments for the popular Sunbeam Mixmaster which makes it even more versatile and helpful in the kitchen than formerly. This is a combination food chopper and meat grinder attachment, which grinds meat for hash, hamburger or minces sandwich filling, chops celery, cabbage, carrots, etc., using the same device, while hitherto the two operations, meat grinding and food chopping, have required separate machines.

The complete unit which consists of gear box, meat cutting plate, and coarse



and fine vegetable cutters, sells for \$5.00 (Denver and West \$5.50), and is packed separate from the Mixmaster, so that its purchase is optional.

The other attachment for the Sunbeam electric Mixmaster, made by the Chicago Flexible Shaft Company, is just being placed on the market. It is a marvelously efficient and practical can opener, which slips on the machine in an instant, and opens cans with smooth, professional ease. It turns the can around automatically, and the can remains on the support until removed.

The new can opener attachment uses the same power unit as the food chopper and meat grinder attachment. It sells to the user for \$1.25, and the power unit, if desired by a customer who does not already have the food chopper attachment, sells separately for \$2.75. (Denver and West \$3.00).

New Sparton Model 34 Automobile Radio

Its seven tube superheterodyne chassis carries the new RF pentode tubes No. 39, with a special tube for automatic volume control. Type No. 238 push-pull pentodes for extra output. A new Sparton developed drive makes possible mounting the Model 34 either on the dash or beneath the floor. Dynamic speaker, antenna trimmer condenser and other Sparton features.



Remler Makes New Condenser Microphone

The announcement of a condenser microphone made by Remler, pioneer radio manufacturer, is of unusual interest to public address distributors, amateur broadcasters, sound technicians and others.

This new microphone has two stages of pre-amplification and is a strictly professional piece of equipment. In addition to the floor model illustrated, the Remler comes in a suspension type, and for the benefit of amateurs the head is sold separately, either with or without head housing.

This new condenser microphone has an essentially flat response from 40 to 10,000 C.P.S. and may be A.C. operated with power supply unit.

The gold plated head has a non-resonant molded grill, and gold plated back plate. It is moisture proof. The diaphragm is pressure equalized. The head amplifier and transmitter head, which is machined to a factory precision of .0005 inch, is a complete plug-in assembly.

The Remler has a combination 50 and 200 Ohm output. The bakelite trans-

mitter head has an imbedded copper shield eliminating electrical interference. Automatic bias, and a specially high permeability core, are other factors in the outstanding performance of this efficient microphone.

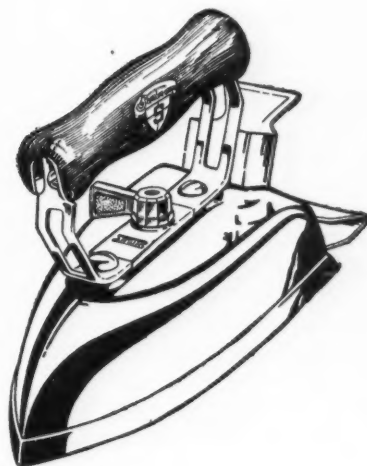
Housing and stand are beautifully finished in statuary bronze, and the floor stand is rubber padded. The height of the floor type is adjustable from 43 inches to a maximum of 61 inches fully extended.

View of the speaker is not unnecessarily obstructed by reason of the fact that the pre-amplifier housing is only two and one-half inches in diameter. The weight complete—including stand, pre-amplifier, head and cable is just twenty pounds!

Every part of the Remler Condenser Microphone is Remler designed and built.

F. G. Hawkinson, formerly with R. C. A., and his associate, R. B. Walder, well known in technical circles for his work with General Film of Hollywood, and the Techma Company of Seattle, are in charge of the newly organized public address department of the Remler Company.

Hawkinson announces that distributorships are being lined up throughout the country to handle the new Remler Condenser Microphone and other Remler made equipment.



The New Sun Beam Electric Iron

Another of the new items by The Chicago Flexible Shaft Company is this Sun Beam Electric Iron with variable temperature control. It is priced very low and, because of its many features and its low price, a considerable volume of business is reported by the manufacturer. Catalogs of all new Sun Beam appliances are now ready for distribution and can be had by writing the factory.

The Monthly R. M. A. News Bulletin

RMA Directors Meet

Fred D. Williams of Indianapolis, the newly elected president of the Radio Manufacturers Association, is arranging a meeting of the RMA Board of Directors during July at Niagara Falls, Canada. The RMA policies and program for the coming year under the new administration of President Williams will be considered at this meeting, the regular mid-summer meeting of the new governing board of the RMA and the annual visit of the radio leaders to Canadian soil. The meeting will be held at the Clifton House at Niagara Falls.

Continuation of all present services to and privileges of RMA members, despite reduction in membership dues and operating expenses of the Association, together with the development of new sales promotion activities are among the important subjects which will be before the RMA directorate. Problems of the new federal radio tax law also will be considered.

Reports of the recent Eighth Annual RMA Convention and Trade Show at Chicago also will be received.

Exports to France

Additional information regarding the new French tariff decree, under which radio shipments to France are materially increased by virtue of the higher French import quota, have been secured by the RMA Foreign Trade Committee, Arthur Moss of New York, chairman. The Bureau of Foreign and Domestic Commerce at Washington has advised the RMA that revision upward of the French tariff quota, effective July 1, provides for an increase of about twenty per cent for the July, August, and September quota in American exports to France of receiving sets, parts and accessories (except tubes), and an increase of about forty per cent in tubes. In this connection the Department of Commerce added the following explanation:

"Inasmuch as American firms have over-shipped the United States quota during the first months of this year to such an extent that a part of the third quarter quota has already been drawn upon in advance, the actual amount of new business possible with France during the next quarter will probably be less than the full amount of the allotment indicated.

In order to regularize the trade and to minimize such over-shipments in the future, the French government has assured the United States that they will make available to French importers the monthly statistics showing the status of importations of commodities subject to quota, at several specified places in France. Your distributors in France, should, therefore, now be in a better position to estimate the amounts that they will be allowed to import before they ask you to ship further goods."

The American Manufacturers Export Association, in which membership is held by the RMA, advises further in part as follows:

"(a) In all matters relating to quotas and restrictions on importations the French Government will assure to the United States most-favored-nation treatment, it being understood that the distribution of quotas will depend upon the importations of each country.

"(b) The French Government accepts that the quota fixed for an American commodity shall not be reduced to an amount less than 10 per cent of the total importation of that commodity during the year 1931 when the importation from the United States during the same year 1931 has been equal to or greater than 10 per cent. Should it be inferior to 10 per cent of the total importation the quota will be fixed at the level of the 1931 importation from the United States.

"(c) The French Government will offer representatives of American industries the opportunity of taking part in conversations between industrials relating to the fixing of quotas when these quotas will be of special interest to American importations into France.

"In order to avoid undue importations and the retroactive measures when these may involve, the French Government reserves the possibility of taking for the duration of these conversations precautionary measures limiting foreign importations to the figures reached during the corresponding period of 1931.

"(d) Goods en route at the time a quota concerning them is published will not be subject to any embargo. They will be charged against the said quota and, if they exceed it, against the future quotas.

"(e) The French Government has no objection to the institution of a satisfac-

tory license system for the allocation of industrial quotas among the various importers of the commodities subject to restriction, it being understood that the administration of this system will be entrusted to an organization authorized thereto by the American Government and approved by the French Government and that the latter reserves the right to resume its liberty of action should licenses not be allocated in such a way as to maintain channels of the trade concerned, it being further understood that this organization will have access to the appropriate French officials to insure the smooth operation of the licensing system.

"(f) The French Government will hold at the disposal of importers monthly statistics showing the status of importations subject to quotas at Paris at the National Office of Foreign Commerce; at Bordeaux, Cherbourg, Le Havre and Marseilles at the office of the Chamber of Commerce."

Excise Tax Regulations

Treasury Department regulations, Official 46, relating to the new five per cent federal excise tax on radio products, are being secured at Washington by the RMA and soon will be mailed to all members. Regulations also will be available at the offices of local Internal Revenue Collectors. Many inquiries regarding the new tax law and the Treasury's interpretations and regulations are being handled for RMA members by Frank D. Scott, Legislative Counsel of the Association, 215 Munsey Building, Washington, D. C., and all possible future information and service in the operation of the new law will continue to go to all RMA members. Individual manufacturers will determine their own policies as to discounts, invoicing, purchasing, etc., on which the RMA has made no recommendations beyond giving as complete information as possible for the guidance and assistance of its membership.

Automotive Sets

With special public interest and sales active in receiving sets for automobiles, the RMA is pressing development of this expanding market. Contacts between the RMA and the automotive industry, not only toward developing further use of radio in the automotive field, but also in

its engineering improvements, are being widened, in the interests of members of both industries. Of especial interest in automotive engineering are recent negotiations between Dr. C. E. Brigham of Newark, N. J., director of RMA Engineering Division, and Mr. John A. C. Warner, general manager of the Society of Automotive Engineers toward development of a co-ordination committee between these two organizations for co-operative work in automotive radio design and installation. Some of the problems involved are space requirements for radio in automobiles, the new "B" eliminator, aerial installations and interference problems.

Measures of closer cooperation, especially on standards between the Canadian RMA and our organization in this country, also have been effected, to widen the exchange of information on engineering development.

Exports to Latin America

In an effort to increase radio sales in Brazil, Argentine and Uruguay and meet new problems of foreign exchange, credits, tariffs and other restrictions in these countries, an interchange of information and trade practices between RMA members is effected. Questionnaires were sent recently to RMA members and their export representatives for information to summarize the most effective methods of meeting competition and developing American sales in the three countries which now are primary markets in Latin America.

RMA School Manual

The manuscript for the school equipment manual being prepared jointly by the RMA and the Office of Education of the Department of the Interior will be completed soon and arrangements made for early printing and publication. A. C. Kleckner of Racine, Wisconsin, is chairman of the committee which has been developing this manual to aid educators of

public schools and colleges in radio equipment. Editorial work, based on contributions of valuable technical data from many RMA members, for the manuscript has been completed by the editor for the Association, Mr. Orrin E. Dunlap, Jr., Radio Editor of the New York Times. It is hoped to send the manual to press within the next few weeks.

Radio Legislation

While much radio legislation has reached various stages of discussion in Congress, adjournment has approached with little action on any important matters except the long pending copyright revision bill primarily of interest to broadcasters. Radio interests in the national and state legislatures, as well as municipal ordinances, are to be in the charge for another year of H. B. Richmond of Cambridge, Mass., former RMA president and reappointed by President Williams as chairman of the Association's Legislative Committee. Chairman Richmond has appointed the following to serve on the committee for the ensuing year: W. J. Barkley of Passaic, N. J.; C. C. Colby of Canton, Mass.; Franklin Hutchinson of New York, N. Y.; Morris Metcalf of Springfield, Mass.; John W. Van Allen of Buffalo, N. Y. General Counsel of the RMA, and Frank D. Scott of Washington, D. C., Legislative Counsel of the RMA.

For service as RMA Legislative Counsel in Washington, former Congressman Frank D. Scott of Michigan, has been re-engaged and has been especially active recently in connection with problems of RMA members in connection with the new five per cent excise tax.

RMA Credit Service

Organization of the RMA Credit Committee, both eastern and western divisions, has been effected to continue the Association's credit and collection service to members for another year. The eastern and western committees hold meetings every few weeks and Chairman Harry W.

Simpson has appointed Phil C. Lenz of Chicago as vice-chairman of the western group. The eastern committee will meet July 12 to choose a vice-chairman. As reorganized for the ensuing year the western committee members include the following: H. E. Anderson, F. M. Colvin, A. A. Dailey, F. Dillbahr, D. R. Dunham, E. L. Ferguson, L. P. Finley, J. E. Galvin, H. F. Horstmeyer, Howard B. Jones, M. Kaegy, Donald MacGregor, A. G. McCallum, F. P. O'Hara, R. H. Walpole, Thos. A. White, all of Chicago; P. G. Crewe of Racine, Wis., George Hough of Milwaukee, Wis., V. E. Lee of Bellwood, Ill., G. W. Leep of Louisville, Ky., and P. D. Renshouse and G. W. Spindler of Fort Wayne, Indiana.

Show Committee Appointed

For later consideration of a trade show in 1933, the RMA Show Committee personnel has been appointed by Mr. Leslie F. Muter of Chicago, chairman. Invitations for the Ninth Annual Convention and Trade Show of the RMA, already have been received from Chicago, New York, Philadelphia and Atlantic City. The Show Committee and RMA Board of Directors will, during the next few months, consider the invitations and make plans for 1933. Those appointed on the committee by Chairman Muter are: J. Clarke Coit, R. D. Siragusa, H. C. Forster, G. F. Burgess, J. T. Beatty, M. Frank Burns, O. F. Jester of Chicago, Ill.; James M. Skinner and F. E. Basler of Philadelphia, Pa.; J. M. Spangler, H. Curtis Abbott and H. H. Frost of New York; Neil Bauer of Cincinnati, Ohio; H. G. Sparks of Jackson, Mich.; E. A. Nicholas of Camden, N. J.; B. C. Bowe of Bridgeport, Conn.; B. G. Erskine of Emporium, Pa.; H. A. Beach of Rochester, N. Y.; R. B. Austrian of Newark, N. J.; E. R. Farny of Tonawanda, N. Y.; Morris Metcalf of Springfield, Mass.; Meade Brunet of Harrison, N. J.; J. L. Barron of South Haven, Mich.; and F. D. Williams of Indianapolis, Indiana.

Broyles Now With Packard-Capehart, Inc.

THE many friends of Mr. J. E. Broyles will be pleased to learn that he is associated with Mr. H. E. Capehart in the organization of PACKARD-CAPEHART, INC., Fort Wayne, now manufacturing a complete line of popular-priced automatic phonograph-radio combinations.

Mr. Broyles recently resigned from his position of Secretary and General Sales Manager of The Capehart Corporation, having been identified with this organization since the founding of the company by Mr. Capehart.

In his contacts with musical instrument dealers in all sections of the country, Mr. Broyles has developed a sincere insight into the problems of retail merchants. It is pointed out that the trade has always been looking for an automatic record changer priced only a trifle higher than straight turntable jobs and that the new company now has just such a product to offer.

Mr. Broyles is most enthusiastic over the dealer interest evidenced in the advance showing of the PACKARD line of popular priced automatic phonograph-

radio combinations. Detailed announcements covering the new PACKARD-CAPEHART line will soon be made to the trade.

Mr. H. E. Capehart, Fort Wayne, Indiana, announces the appointment of R. G. Norman as advertising manager of PACKARD-CAPEHART, INC.

Mr. Norman formerly was advertising manager of The Capehart Corporation but recently resigned from this position to become associated with the new organization in a similar capacity.

Stewart-Warner Uses Sound Picture to Sell New Model Radio Receiver

"Radio Magic", a one reel sound motion picture featuring a new short wave length radio receiver, has just been produced for the Stewart-Warner Corporation of Chicago by the Atlas Educational Film Company in co-operation with the Metropolitan Motion Picture Company of Detroit.



The climax of a radio-directed manhunt by city police. One of the many thrills pictured in Stewart-Warner's film, "Radio Magic".

then describes, by means of animated drawings, the route traveled by both long and short radio waves in relation to the earth's surface. The operation of the new Stewart-Warner Radio is picturized and described, showing how a turn of the dial brings into play, in addition to ordinary broadcast wave reception, each of the three short wave stages.

Reception of programs from foreign stations, ships at sea, police radio messages, communication between airport operator and pilot, and finally an S.O.S. message from a sinking steamer are all dramatically pictured and described.

The film concludes with shots of London Bridge, the Hawaiian Beach, the Coliseum at Rome, a trans-Atlantic Liner and the Eiffel Tower in Paris—all illustrating the range and power of the new radio receiver.

The Stewart-Warner Corporation are using the film in connection with a dealer's co-operative plan being conducted throughout the country. The dealer arranges with a theatre in his territory to give away one of the new Stewart-Warner radios. Short trailers are run at the theatre for two weeks in advance, announcing the contest and the date that the drawing will be made. During the week that the radio is actually given away, the theatre runs the one reel picture which takes about 10 minutes to screen. A radio display is also installed in the lobby of the theatre during the contest.

Because of the lack of patronage with which most theatres are suffering today, the Stewart-Warner plan, designed both to publicize the radio and increase box office receipts, is being well received.

Stewart-Warner dealers are also taking advantage of numerous other opportunities to obtain greater circulation and publicity. In some instances they are buying blocks of tickets from the theatre giving them out to their immediate prospects.

Many dealers are planning the use of copies of the film for showing before educational institutions, service clubs and for special exhibition in radio stores handling Stewart-Warner equipment.

The picture was produced in silent form by the Atlas organization—then taken to the new studio of the Metropolitan Motion Picture Company where it was scored with voice and musical background with RCA Photophone sound equipment.

The film traces briefly the development of the radio from the small crystal set to the present Stewart-Warner creation which offers the last word in radio reception. The film

H. E. Capehart Resigns From Board of Directors of the Capehart Corporation

H. E. CAPEHART, founder of The Capehart Corporation, Fort Wayne, and pioneer manufacturer of automatic record changers and automatic phonograph-radio combinations, recently resigned from the directorate of this company to devote his full energy to the business of the newly organized firm of PACKARD-CAPEHART, INC., Fort Wayne, Indiana.

PACKARD-CAPEHART, INC., will manufacture a complete line of popular priced automatic phonograph-radio combinations and record-changing units. In addition to the domestic market, particular attention will be given to foreign demand for this kind of merchandise. Inasmuch as the PACKARD models are in a lower price range, hitherto neglected in the merchandising of automatic combinations, it is anticipated that a most satisfactory volume of business will be obtained by the new company.

Associated with Mr. Capehart in his new company are men who were identified with him in the other company and who are thoroughly acquainted with the design, manufacture and merchandising of musical instrument products.

The new firm of PACKARD-CAPEHART, INC., will shortly announce a complete line of automatic combination models appealing to the masses in the price range of straight radio models.



J. E. Smith
President

**National Radio
Institute**

I have Doubled and Tripled Salaries

Many Good Jobs Open Every Year in RADIO

I'll Train You at Home to Fill a BIG PAY Job in Radio

Send for my book of information on the opportunities in Radio. It's FREE. Mail the coupon now. A flood of gold is pouring into this vast industry. Get into a field with a future. N. R. I. training fits you for manufacturing, selling, servicing sets, in business for yourself, operating on board ship or in a broadcasting station, television, aircraft Radio, and many other branches. My FREE book gives you full information on Radio's many opportunities for success and how you can quickly learn at home to be a Radio Expert.

Many Make \$50 to \$100 a Week

Why struggle along in a dull job with low pay and no future? Start training now for the live-wire Radio field. I have doubled and tripled salaries. Many men holding key jobs in Radio got their start through N. R. I. training.

Your Training Need Not Cost You a Cent


Hold your job. I'll not only train you in a few hours of your spare time a week, but the day you enroll I'll show you 28 ways to make money on the side repairing, installing, selling Radio sets in your neighborhood. I give you Radio Equipment for making experiments and testing equipment that teach you to build and service practically every type of receiving set made. G. W. Page, 1606-B 5th Ave., N., Nashville, Tenn., writes: "I picked up \$935 in my spare time while taking your course."

ACT NOW

Get My Book — FREE

My book has shown hundreds of fellows how to make more money and win success. Investigate. Find out what Radio offers you, what my Employment Department does to help you get into Radio after graduation, and the many other features of my training. Mail the coupon for your copy RIGHT NOW. J. E. Smith, President, Dept. 2HK4, National Radio Institute, Washington, D. C.

MAIL NOW for FREE PROOF



J. E. SMITH, President
National Radio Institute
Dept. 2HK4
Washington, D. C.

Dear Mr. Smith: Send me your free book, explaining your home-study training and Radio's opportunities for bigger pay. I understand this places me under no obligation.

NAME.....

ADDRESS.....

CITY.....STATE.....



Broadcasting Stations employ trained men continually for jobs paying up to \$5,000 a year.



Aviation is needing more and more trained Radio men. Operators employed through Civil Service Commission earn \$1,620 to \$2,800 a year.



Spare time set servicing pays many N. R. I. men \$200 to \$1,000 a year. Fulltime men make as much as \$65, \$75, \$100 a week.



Talking Movies—an invention made possible only by Radio.

Description of New Atwater Kent Models

(Continued from page 20)

Model 260—10 Tube Superheterodyne Console

60 cycle, 110 volt A.C. Complete with tubes, \$99.00. Tubes used: 2-47; 3-56; 4-58; 1-80. Also furnished in 25 cycle. Model 260F, \$106.50.

Model 469—9 Tube Superheterodyne Console

60 cycle, 110 volt A.C. Complete with tubes, \$89.00. Tubes used: 2-47; 3-56; 3-58; 1-80. Also furnished in 25 cycle. Model 469F, \$96.50.

Model 188—8 Tube Superheterodyne Console

60 cycle, 110 volt A.C. Complete with tubes, \$69.50. Tubes used: 1-47; 2-56; 3-58; 1-80. Also furnished in 25 cycle. Model 188F, \$74.50.

Model 228—8 Tube Superheterodyne Compact

60 cycle, 110 volt A.C. Complete with tubes, \$59.50. Tubes used: 1-24; 2-27; 3-35; 1-47; 1-80. Also furnished in 25 cycle. Model 228F, \$64.50.

Model 228D 6 Tube Superheterodyne Compact Direct Current

Complete with tubes, \$64.50. Tubes used: 1-33; 3-36; 2-37.

Model 228Q 7 Tube Superheterodyne Compact Battery Operated

Complete with 2-volt tubes, Air Cell "A" Battery, 3 heavy duty "B" Batteries and "C" Battery, \$82.50. Tubes used: 2-30; 4-32; 1-33.

Model 567—7 Tube Superheterodyne Compact

60 cycle, 110 volt A.C. Complete with tubes, \$49.50. Tubes used: 1-24; 1-27; 3-35; 1-47; 1-80. Also furnished in 25 cycle. Model 567F, \$54.50.

Model 93—Shortwave Converter

25-60 cycle, 110 volt A.C. Complete with tubes, \$39.00. Tubes used: 2-27; 1-24; 1-80.

Atwater Kent Radio for Motor Cars 9 Tube Superheterodyne

Tubes used: 3-36; 4-37; 2-38. Now three methods of installation:

Model 91—Set and Battery Container mounted under floor.

Model 91B—Cowl installation.

Model 91C—Separate set container mounted under floor and accessible from above.

Price, Model 91, \$69.80, complete with tubes, less batteries and installation cost.

All prices are Eastern prices. All prices quoted subject to Federal tax levied on radio sets or tubes.

A Brand New SHORT WAVE LOG

The Simplest, Most Fool-Proof, Complete Log Ever Designed.

HERE is a new type of SHORT-WAVE LOG that absolutely beats any log you ever saw! It is so simple any woman can understand it and yet complete in every detail. Short-wave stations of the world are clearly arranged, giving both megacycles and kilocycles. A complete, legible map of the world tells you where every station is, and the time divisions of the world. All stations listed have been **actually logged** and complete information about their time on the air, location, quality of reception, etc., is included.

The new SHORT-WAVE LOG has an exclusively patented feature in a movable clock-dial, giving accurate time at any point in the world. In addition, Don Wallace, nationally-known short-wave expert, has written an introduction that explains in clear detail exactly how to install and operate a short-wave set to get the best reception.

Designed and edited by

Don Wallace

Winner of Hoover Prize for the best amateur short wave station in America.

...

LIST PRICE 25c

1 to 100 copies . . . 12 1/2c ea.
100 to 1000 copies . . . 10c ea.
1000 or over 8c ea.

(If imprint or advertisement is desired on logs, please send copy with order and include \$2.00 for imprinting, regardless of quantity.)

...

DON C. WALLACE

4214 Country Club Drive
Long Beach California

Tell them you saw it in RADIO

The PARK WILSHIRE HOTEL APARTMENTS

Most desirably situated on Wilshire Boulevard, adjoining beautiful Westlake Park—15 minutes from the city center. By bus directly in front of the building and by three car lines within one block.

Apartments from \$75 a Month
Also Daily and Weekly Rates

2626 Wilshire Blvd., at Westlake Park

Modern, Homelike and
Supremely Comfortable



FREE!

Your Choice of Nine Meters!

To do your radio work properly you need meters. Here is your opportunity to get them at no extra cost. See the list of nine meters below. Heretofore we have offered the choice of any one of these meters free with an 8-weeks subscription for RADIO WORLD, at \$1, the regular price for such subscription. Now we extend this offer. For the first time you are permitted to obtain any one or more or all of these meters free, by sending in \$1 for 8-weeks' subscription, entitling you to one meter; \$2 for 16 weeks, entitling you to two meters; \$3 for 26 weeks, entitling you to three meters; \$6 for 52 weeks, entitling you to six meters. Return coupon with remittance, and check off desired meters in squares below. RADIO WORLD is the only National Radio Weekly. 15c copy. Newsdealers everywhere. 11th year.

RADIO WORLD,
145 West 45th Street, New York, N. Y.
(Just East of Broadway)

Enclosed please find \$..... for
.....weeks subscription for RADIO WORLD
and please send as free premium the meters
checked off below.

☐ I am a subscriber. Extend my subscription.
(Check off if true.)

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| <input type="checkbox"/> 0-6 Voltmeter D.C. | No. 326 |
| <input type="checkbox"/> 0-50 Voltmeter D.C. | No. 337 |
| <input type="checkbox"/> 6-Volt Charge Tester D.C. | No. 23 |
| <input type="checkbox"/> 0-10 Amperes D.C. | No. 338 |
| <input type="checkbox"/> 0-25 Milliampers D.C. | No. 325 |
| <input type="checkbox"/> 0-50 Milliampers D.C. | No. 350 |
| <input type="checkbox"/> 0-100 Milliampers D.C. | No. 390 |
| <input type="checkbox"/> 0-300 Milliampers D.C. | No. 399 |
| <input type="checkbox"/> 0-400 Milliampers D.C. | No. 394 |

NAME

ADDRESS

CITY..... STATE.....

Columbia Adds Many New Distributors

Columbia Phonograph Co., Inc., is rapidly perfecting its system of distribution for the new line of radio receiving sets, recently designed and exhibited for the first time at the Chicago show of the Radio Manufacturers Association.

Among the additional distributors just appointed are:

Milhender Electric Supply Co., Boston, for the Boston territory.

Stern & Company, Portland, Me., for the Maine territory.

G. and M. Distributing Co., Harrisburg, Pa.

Rockefeller Accessories Co., Sunbury, Pa.

Kelly-How-Thompson, Duluth, Minn.

F. C. Hayer & Co., Minneapolis, Minn.

Interstate Sales Co., Milwaukee, Wis.

Electric Supply Co., Tampa, Fla.

Commenting on the progress made with the new line, H. Curtiss Abbott, vice-president in charge of Sales Merchandising and Advertising of the Columbia Company, states:

"We are particularly pleased with these appointments, especially in view of the fact that many of these distributors attended the Chicago show and there selected Columbia from among the many excellent lines exhibited. I am convinced that Columbia's forty-two years of music recording background had much to do with their decisions. These distributors have sensed the demand from the public for tone quality in radios; and the Columbia product has met every competitive test.

"Another factor is that we are not so much interested in the buying program of our distributors as in their selling ability.

"One of our outstanding models is the air-cell receiver, which has never been featured in console type complete with the air-cell battery and tubes, listing for \$99.50 complete. Our sets are priced competitively and consist of radios, radio combinations and radio with twin speakers, all of which are built around the new two and one-half volt tubes.

"Distributors who have exhibited our sample lines report enthusiastic reception on the part of their dealers, many of whom have been Columbia customers for years prior to our entry in the radio field. They are expecting a satisfactory business during the summer months and a decided pick-up in the fall."

Tell them you saw it in RADIO

GUARANTEED Microphone Repairs

Any make or Model—24 hour service. Stretched diaphragm double button repairs \$7.50. Others \$3.00. Single button repairs \$1.50.

Write for 1932 Catalog with diagrams.

Universal Microphone Co., Ltd.
INGLEWOOD, CALIF.

20-Watt D. C. Power Amplifier

\$65.00 LIST, with
Cunningham Tubes

Write for full details.

VICTORY SPEAKERS, INC.
7131 East 14th St. OAKLAND, CALIF.

Hotel Canterbury

A DISTINGUISHED address, amid an atmosphere that grows more charming each day of your visit.

Whether you stay for a day, week, month or year, the Canterbury's truly splendid appointments are at your disposal to make your San Francisco visit thoroughly delightful.

250 outside rooms, each with bath and shower; now from \$2.00 per day.

Attractive Rates to Permanent Guests
Excellent Cuisine
MANAGEMENT
KENT W. CLARK

750 SUTTER ST.
SAN FRANCISCO

FOR COMPLETE PUBLIC ADDRESS EQUIPMENT



Hand Lapel Mikes \$5.00 up. One- and Two-Button Mikes, 18 types, \$5.00 up to \$75.00. Microphone Stands, Cable, Horns, Units, Amplifiers at lowest prices. Write for Catalog "R".



MILES REPRODUCER Co.

26 EAST 22nd ST. NEW YORK, N. Y.

SERVICEMEN
save
TIME
MONEY

with **CLAROSTAT**
ad-a-switch
VOLUME CONTROLS



CON'T lose service business. You need never be stuck in an emergency if your bag contains AD-A-SWITCH. You can convert from plain to switch control in a jiffy. Snaps on without tools. Ask your jobber or write us direct.

FREE! Write for your copy of the most complete handbook on every type of variable resistance—from tiny Center Taps and Volume Controls up to Heavy Motor Speed Controls.

Every experimenter, service man and engineer should have a copy of the Clarostat Control Handbook.

CLAROSTAT MFG. Co.
285-287 N. 6TH ST. BKLYN. N.Y.

This Plan will Make Money for You

A beautiful 250 page book of de luxe art portraits of leading radio artists . . . with a brief biographical sketch of each. Bound in heavy fabrikoid with gold lettering. Size 7x10 inches. Nothing of this nature has ever before been attempted in the radio field. This "book of the stars" is your ideal means for bringing customers into your store . . . for use as a gift with the sale of a set or accessory . . . for retail sale to your customers who have long wanted just such a book . . . for use as prizes and premiums. The list price of the book is \$2.50. Your price is \$1.50 in lots of one; \$1.25 per copy in lots of six or more. Get **ONE** copy. Convince yourself of its merit. Watch your customers snap it up. Ready for delivery on June 15th. But to insure early receipt of copies your order should be sent today. The supply is limited.

For sale by "RADIO"
Pacific Building San Francisco


Hotels for Radio Travelers

HOTEL NORMANDIE

provides the maximum of comfort at reasonable cost. Located just outside the congested district of Los Angeles, yet close to the best shops, theaters and churches, the NORMANDIE offers every advantage you desire in your selection of a temporary or permanent home.

Rates
Room with Bath, single, \$2.50 per day
Room with Bath, double, \$4.00 per day
Monthly Rates on Application

The cuisine, excellent service and reasonable rates in the **COFFEE SHOP AND CAFE** combine to make your stay a pleasant one.
(Storage in Connection)



CORNER SIXTH & NORMANDIE
LOS ANGELES

HEATHMAN HOTELS
530 ROOMS

Finest location in Portland in the heart of the shopping and theater districts and facing post office. Convenient garage just across the street.

RATES
Single room with bath \$2.25 and up
Double room with bath \$3.50 and up

Concerts twice daily on \$25,000 organ
HARRY E. HEATHMAN
Manager



Portland, Oregon

hotel DEL MAR

DEL MAR is a resort of the first class—no commercialism—no concessions—just one of the most beautiful spots in the world where fine people and world travelers congregate to enjoy nature's special gifts.

Write for reservations today to Manager Hotel Del Mar or Los Angeles office, 740 South Broadway. Rates from \$6-\$8 to \$10 per day single—\$11 to \$20 double room and three delicious meals.

30 miles north of San Diego—9 miles from La Jolla and 100 miles south of Los Angeles along the King's Highway
"The Garden Spot of the South Coast"



SOUTHERN CALIFORNIA

The
ARCADY

Rising twelve stories above the exclusive Wilshire district, overlooking the beauties of Westlake and Lafayette Parks, the Arcady offers every comfort and convenience for the traveler

LOS ANGELES
WILSHIRE at RAMPART




The
Gaylord
AN APARTMENT HOTEL

OPPOSITE AMBASSADOR GARDENS

THE GAYLORD fulfills with lasting satisfaction the desires of a discriminating clientele; offering two, three and four rooms furnished, one and two baths. Rates from \$100.

Cafe - Room Service
Los Angeles
WILSHIRE at KENMORE




20-Watt D.C. Power Amplifier
Write for full details.

\$65.00 LIST, with Cunningham Tubes
VICTORY SPEAKERS, INC.
7131 East 14th St. OAKLAND, CALIF.

Tell them you saw it in RADIO

Sentinel ALL-WAVE



Sentinel No. 125 Eight-Tube All-Wave Superheterodyne Console, with Automatic Volume Control and Tone Control. Furnished in a beautiful six-legged walnut cabinet of Tudor design. List price, with tubes **\$89.50**

13 to 550 Meters With Only One Knob

Here is the all-wave set for which you have been waiting. A triumph of tuning simplicity and radio performance. Four bands all calibrated on one dial. Complete control of dial with a single two-speed knob. Special band selector switch. Eight-tube superheterodyne. Greatly improved automatic volume control. All parts mounted on a single chassis pan. Matched electrodynamic speaker.

These features will answer your demand for a practical all-wave set. Send for complete information.



No. 115 Ten-Tube Superheterodyne Console with Automatic Volume Control and Tuning Meter. Deluxe walnut semi-Tudor cabinet with doors. Full-vision dial. Tone control. List price, complete with tubes **\$99.50**



No. 120 Eight-Tube Superheterodyne Console, with Automatic Volume Control, Walnut Tudor cabinet. Full-vision dial. Tone control. List price, complete with tubes **\$79.50**

Sentinel offers you the most up-to-the-minute line in radio. A complete range of models. Each set upholds the Sentinel name for outstanding performance and value. Furnished as complete sets, or chassis only. Wire or write for samples; also for new sales plan for jobbers and dealers.

SENTINEL RADIO DIVISION

UNITED AIR CLEANER CORP.

9705 Cottage Grove Ave., Chicago, Ill.

Sentinel
SURPASSING RADIO PERFORMANCE



No. 116 Five-Tube Superheterodyne Console. A big value in a small set. Full-vision dial. Tone control. Complete, with tubes **\$56.50**



No. 110 Seven-Tube Superheterodyne Console, Walnut Tudor Cabinet. Full-vision dial. Tone control. List price, complete with tubes **\$62.50**



No. 118 Five-Tube Superheterodyne Table Model. Same chassis as above in a neat burl walnut cabinet. List price, complete with tubes **\$39.95**



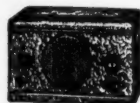
No. 110 Seven-Tube Superheterodyne Table Model. Same chassis as above. Big-set performance in an attractive walnut cabinet. List price, complete with tubes **\$46.75**

~TONE QUALITY~SELECTIVITY~SENSITIVITY~CONSTRUCTION~

"Elected" to make Radio History in 1932-33

The Crosley "Marvel" Series

The Crosley VAGABOND



A 5-tube superheterodyne in a beautiful metal cabinet. Uses 2½-volt heater tubes—balanced image suppressor pre-selector—dynamic speaker and other radio refinements. Dimensions: 8½" high, 13½" wide, 7" deep. **\$29.25** Complete with tubes Plus Tax

The Crosley NOMAD



A chest model 5-tube superheterodyne in a cabinet of selected walnut veneer. Uses same chassis and dynamic speaker as The Crosley VAGABOND. Dimensions: 8½" high, 12½" wide, 7" deep. **\$32.50** Complete with tubes Plus Tax

The Crosley "Election" Series

The Crosley JUSTICE



This 6-tube superheterodyne incorporates 2½-volt heater tubes—push-pull pentode output—double tuned image suppressor pre-selector—dynamic speaker and other outstanding features. Dimensions: 16½" high, 13½" wide, 8½" deep. **\$38.50** Complete with tubes Plus Tax

The Crosley ALDERMAN

An exquisite chest model overlaid with walnut veneer. Dynamic speakers at both ends. Uses same chassis as The Crosley JUSTICE. A sensational radio value. Dimensions: 10½" high, 22" wide, 10" deep. **\$46.50** Complete with tubes Plus Tax



The Crosley JUDGE

A beautiful console incorporating the same 6-tube chassis and speaker as The Crosley JUSTICE. Here is a real radio value at a very low price. Dimensions: 40" high, 25½" wide, 12" deep. **\$48.50** Complete with tubes Plus Tax

The Crosley CONGRESSMAN

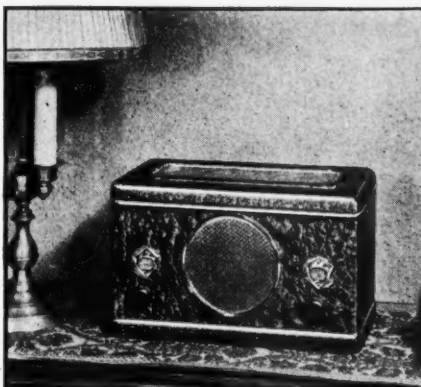


This 9-tube superheterodyne chest model is finished in stump walnut overlays and dynamic speaker. The chassis is same as The Crosley MAYOR. Dynamic speakers at both ends. Dimensions: 11" high, 25½" wide, 11" deep. **\$57.75** Complete with tubes Plus Tax



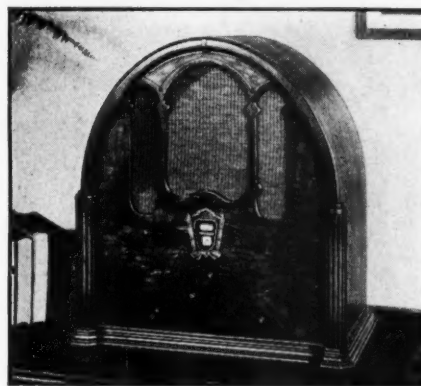
The Crosley SENATOR

A handsome console model incorporating the same 9-tube chassis and dynamic speaker as The Crosley MAYOR. Cabinet is finished in fine woods. Dimensions: 40" high, 23½" wide, 12¼" deep. **\$59.95** Complete with tubes Plus Tax



The NEW Crosley PUP

A 4-tube superheterodyne at a sensationally low price. The compact metal cabinet is finished in subdued silver gray. Incorporates balanced image suppressor pre-selector—combined volume control and on-off switch—illuminated station selector—dynamic speaker. A great radio value. Dimensions: 7½" high, 12½" wide, 7" deep. **\$25.00** Complete with tubes Plus Tax



The Crosley MAYOR

This superheterodyne uses 9 tubes including the new 2½-volt tubes—silent automatic volume control—meter tuning—four gang tuning condenser—double tuned image suppressor pre-selector—full floating moving coil dynamic speaker and other amazing features. "Election" series models bring in short-waves to, and including 1750 kilocycles. Dimensions: 17½" high, 16¾" wide, 9¾" deep. See your Crosley Distributor for details about the new Crosley line. **\$49.95** Complete with tubes Plus Tax

Two Crosley 12-Tube Superheterodynes

The Crosley COMMISSIONER



The new 2½-volt tubes—class "B" amplification—silent automatic volume control—meter tuning—four gang tuning condenser—double tuned image suppressor pre-selector—dual dynamic speakers are only a few of the newest radio developments that are incorporated in this fine 12-tube superheterodyne console model. Dimensions: 45" high, 28½" wide, 14" deep. **\$99.50** Complete with tubes Plus Tax

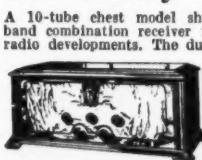
The Crosley AMBASSADOR



An exquisite console of remarkable beauty. Only the finest woods and veneers are used in its construction. It incorporates the same 12-tube superheterodyne chassis and dual dynamic speakers as is used in The Crosley COMMISSIONER. Here is the finest in radio at an amazingly low price. Dimensions: 45½" high, 26" wide, 14" deep. **\$119.50** Complete with tubes Plus Tax

Two Low-Priced Short Wave and Broadcast Band Receivers

The Crosley SECRETARY



A 10-tube chest model short wave and broadcast band combination receiver incorporating the newest radio developments. The dual dynamic speakers are located in the ends of the cabinet. Dimensions: 11" high, 25½" wide, 13¾" deep. **\$75.00** Complete with tubes Plus Tax



The Crosley GOVERNOR

A beautiful console short wave and broadcast band combination receiver having a range from 550 kilocycles to 20 megacycles (20,000 kilocycles). Dimensions: 41½" high, 23" wide, 12¾" deep. **\$89.50** Complete with tubes Plus Tax

Western Prices slightly higher

THE CROSLEY RADIO CORPORATION

Powel Crosley, Jr., President

CINCINNATI

Home of "the Nation's Station"—WLW

YOU'RE THERE WITH A CROSLEY
CROSLEY RADIO

Now ARCTURUS Offers Five Improved Tubes



Recent developments in radio demand new types of tubes. To provide its customers with the latest advantages in tubes, Arcturus has added Types 46, 56, 57, 58 and 82 to its line. The new 6.3 volt tubes—Types 41, 42 and 44—have also been developed.

These new tubes are built to the high quality standards that the industry has come to expect from Arcturus. Many set manufacturers, who use Arcturus *Blue Tubes* as initial equipment, are incorporating these new series in their 1932 receivers—assuring an increased replacement market in addition to the millions of sets now Arcturus equipped.

Here's the new 2.5 volt *Blue Tube* line:

TYPE 82—Full-wave mercury vapor rectifier.

TYPE 58—Variable-mu r. f. pentode. Has uni-potential cathode with a. c. heater.

TYPE 46—Class "B" Power Amplifier.

TYPE 57—Screen-grid detector amplifier. Has uni-potential cathode with a. c. heater.

TYPE 56—Detector, amplifier and oscillator. Has uni-potential cathode with a. c. heater.

Technical data sheets on these new tubes sent on request. If you are not now handling the *blue tube* line, we suggest that you get in touch with your Arcturus Jobber promptly.

ARCTURUS RADIO TUBE CO., NEWARK, N. J.

ARCTURUS

"The BLUE TUBE with the LIFE-LIKE TONE"

WESTERN DIVISION: Arcturus Radio Tube Co., 1855 Industrial Street, Los Angeles, Calif.